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ABSTRACT

Between 1960 and 1972 fundamental shifts have taken place in the relative levels of support provided to different research and development programs. The first half of the 1960's witnessed an unprecedented growth in Federal funding of R&D; this growth was followed by a period when funding leveled off and then declined. For 1972, however, the proposed budget for Federal research and development indicates a significant reversal of the downward trend. Agencies other than those concerned with defense, space, and atomic energy are scheduled to obligate 23% of the 1972 R&D total, compared with 9% in 1960. These are agencies that are devoted to health and education services, the reduction of poverty, the improvement of transportation and communication, the prediction of the weather, better management of crops, forests, livestock, mining, and fisheries, and the preservation of a sound environment. This report is the 20th in an annual series that has recorded the data on which the foregoing trends are based. It provides comprehensive statistical information on the size and scope of Federal obligations for scientific activities and the types of institutions and purposes to which such funds are directed. (Author/HS)

ED 063875

federal funds for research development and other scientific activities

FISCAL YEARS 1970, 1971, 1972

SURVEYS OF SCIENCE
RESOURCES SERIES

NATIONAL SCIENCE FOUNDATION



NSF 71-35
VOLUME XX

Federal Aids for Research Development Other Scientific Activities

1971, 1972

U.S. DEPARTMENT OF SCIENCE
AND TECHNOLOGY
SERIES
FOUNDATION



NSF 71-35
VOLUME XX

ED 063875

subsequent appropriations and apportionment actions

The data appearing in this report for fiscal year 1964 are based on the Budget of the United States Government, as submitted to Congress, and do not reflect subsequent changes made by Executive apportionment. For example, any revisional action on the SST (within the Department of Health, Education & Welfare) will reflect actual effects of this and other later actions reflected in next year's report.

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federal funds for research development and other scientific activities

FISCAL YEARS 1970, 1971, 1972

**SURVEYS OF SCIENCE
RESOURCES SERIES
NATIONAL SCIENCE FOUNDATION**



**NSF 71-35
VOLUME XX**

Federal Aids for Research Development and Other Scientific Activities

1970, 1971, 1972

REVIEWS OF SCIENCE
SOURCES SERIES
THE FOUNDATION



NSF 71-35
VOLUME XX



foreword

Today the relationship of science to society is being reexamined. Government instruments for the support and use of science are being reorganized or created. In such a period data are indispensable for the analysis and study of the various elements that make up the whole structure of science. The **Federal Funds** series provides such data.

The first half of the 1960's witnessed an unprecedented growth in Federal funding of research and development: this growth was followed by a period when funding leveled off and then declined. For 1972, however, the proposed budget for Federal research and development indicates a significant reversal of the recent downward trend. While R&D expenditures as a share of total budget outlays have steadily declined from the 1965 high of 13 percent to a 1972 estimate of 7 percent, this change is more a reflection of the growth of the non-R&D portion of the budget than a diminution in R&D programs.

Between 1960 and 1972 fundamental shifts have taken place in the relative levels of support provided to different programs. Agencies other

than those concerned with defense, space, and atomic energy are scheduled to obligate 23 percent of the 1972 R&D total, compared with 9 percent in 1960. These are agencies that are devoted to health and education services, the reduction of poverty, the improvement of transportation and communication, the prediction of the weather, better management of crops, forests, livestock, mining, and fisheries, and the preservation of a sound environment.

This report is the 20th in an annual series that has recorded the data on which the foregoing trends are based. It provides comprehensive statistical information on the size and scope of Federal obligations for scientific activities and the types of institutions and purposes to which such funds are directed.

The Foundation extends its appreciation to the staff members of agencies responding to the **Federal Funds** survey for their cooperation in meeting survey requirements. The report was prepared under the overall guidance of Charles E. Falk, Director, Division of Science Resources Studies, and the general supervision of Thomas J. Mills, Deputy Director.

W. D. McElroy
Director
National Science Foundation

October 1971

acknowledgments

This report was prepared in the
under the special guidance of Kenneth
Reports Section. The survey was conducted
the direction of Benjamin Olsen, Statistical
Major responsibility for interpreting the results
of the report was taken by Jane P. [unclear]
assisted in reviewing the data, and [unclear]
tion of statistical material.

edgments

This report was prepared in the Division of Science Resources Studies under the special guidance of Kenneth Sanow, Head, Statistical Surveys and Reports Section. The survey was conducted and the report published under the direction of Benjamin Olsen, Study Director, Government Studies Group. Major responsibility for interpreting the data and for organization and writing of the report was taken by Jane Pugh and Eleanor Stoddard. Wayne Zajac assisted in reviewing the data, and Dorothy Knott participated in the preparation of statistical material.

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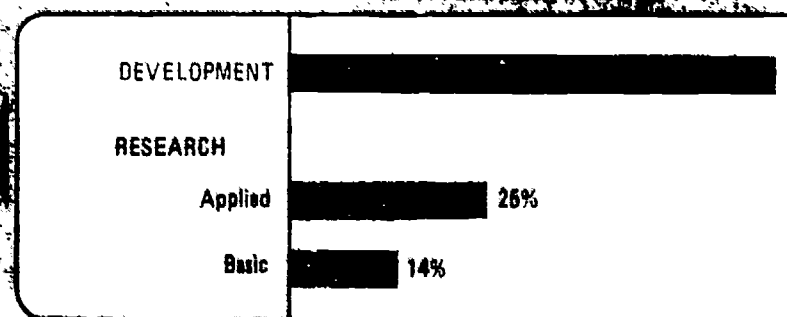
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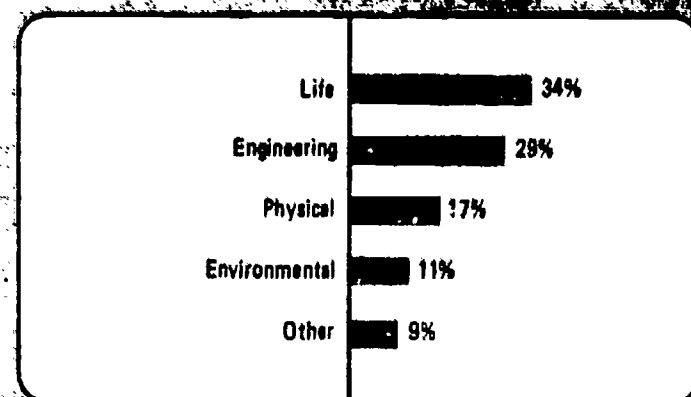
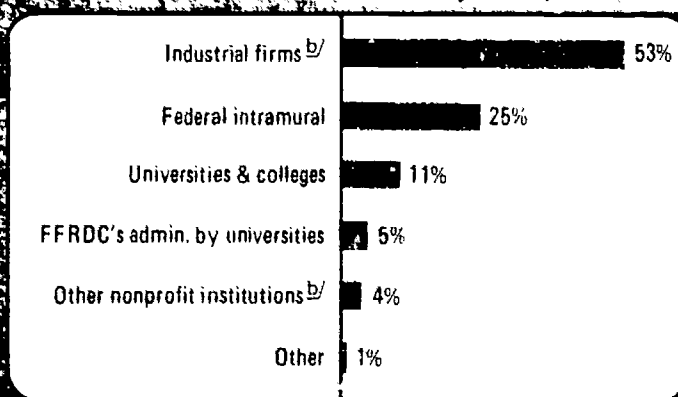
In all tables and charts of this report, details may not add to totals because of rounding. Percentages appearing in the text were calculated on the basis of thousands of dollars and may differ from percentages based on figures rounded to millions of dollars.

Distribution of Federal obligations for research and development, FY 1984 (est.)

By character of work
\$15.4 billion



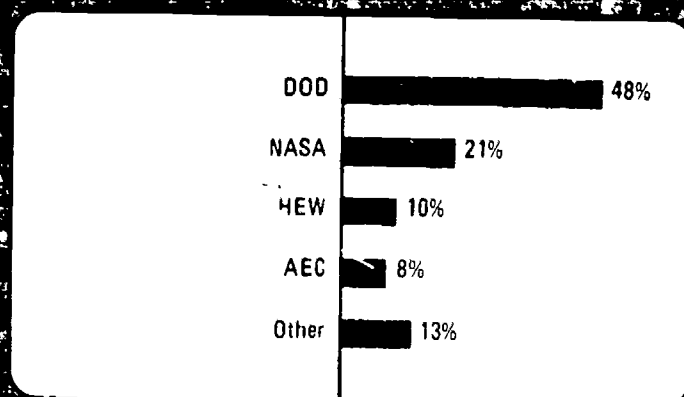
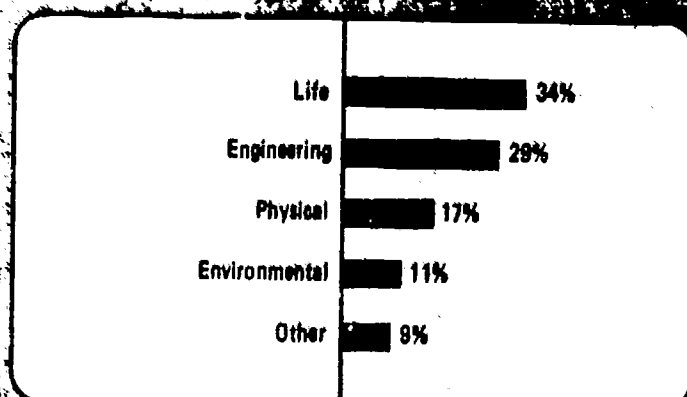
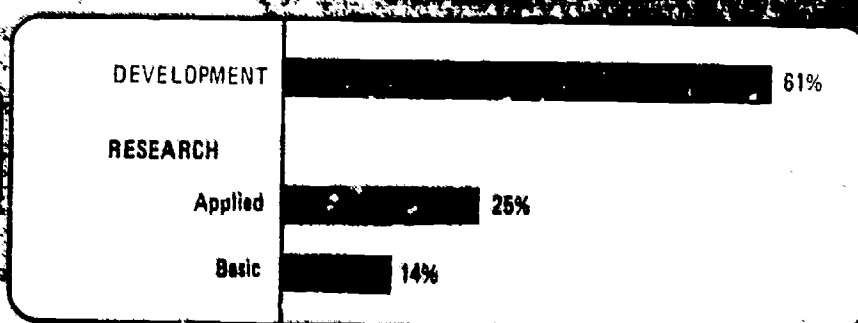
By performer
\$15.4 billion



^{a/} Includes R&D performed by the Federal Government.
^{b/} Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.
 Source: National Science Foundation

ution of Federal obligations for research and development

By character of work
STB-100-210



velopment
or.

highlights

Federal Funds for Research and Development

Federal obligations for research and development (plant excluded) totaled \$15.3 billion in 1970, a low for recent years. A slight rise in the R&D total to \$15.4 billion was expected in 1971, although in terms of constant dollars this figure represents a 5-percent decrease.

However, for 1972 the R&D portion of the budget, as requested, reflects a significant reversal of the recent downward trend. The R&D total of \$16.7 billion marks an all-time high in current dollars.

Basic Research

Basic research obligations are scheduled to rise from \$2.1 billion in 1970 to \$2.2 billion in 1971 and \$2.4 billion in 1972. For the first time in the past decade, Federal support for basic research declined in 1970, but the basic research totals in 1971 and 1972 should establish new records—although in constant dollars a slight decrease is shown between 1970 and 1971 (less than one-half of 1 percent).

In 1971 HEW and NSF contributed importantly to the indicated rise. In 1972 the same two agencies and NASA are the chief factors.

For many years five agencies—NASA, HEW, NSF, AEC, and DOD—have represented the bulk of the Federal basic research effort. In 1971 they were expected to account for 87 percent of the total.

Among all agencies, NASA has led since 1961 in basic research support, and in 1971 its share of total Federal basic research obligations was 29 percent. The chief cause of NASA's predominance lies in the nature of its experiments, which require outlays for costly expendable equipment like launch vehicles and spacecraft.

HEW has been the second largest support agency since 1963; its share of the total in 1971 was 21 percent.

for Research and Development

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Applied Research

Obligations for applied research totaled \$3.5 billion in 1970 and were scheduled to rise to \$3.8 billion in 1971, an 8-percent increase. In constant dollars, however, the increase is only 3 percent.

For 1972 the applied research total is expected to reach \$4.2 billion, another all-time high in current dollars.

In 1971 gains were registered by almost all major agencies, DOD and AEC excepted, and in 1972 all agencies show increases or practically no change.

Three agencies—DOD, HEW, and NASA—continue to dominate the Federal applied research effort. In 1971 they were expected to account for 78 percent of the Federal agency total, although applied research programs of several other agencies are growing rapidly, especially those of DOT, Commerce, EPA, and NSF.

Development

Development obligations totaled \$9.7 billion in 1970. In 1971 they were expected to amount to \$9.4 billion, a 3-percent decline that continues the downward trend started in 1968. If constant dollars are used, the decline becomes 8 percent.

In 1972 the Federal development total is scheduled to rise to \$10.0 billion, about the same level as 1966.

Three agencies—DOD, NASA, and AEC—are most prominent in the Federal development effort in the 1960–72 period. In 1971 they represented an estimated 92 percent of the Federal development total, and DOD alone represented an estimated 63 percent of the total. NASA's share has been declining since 1965 and was expected to be 19 percent in 1971.

Chief impetus to the 1972 increase is provided by DOD. Other agencies contributing to the rise are HEW, the Postal Service, EPA, and Interior. Declines in development obligations in 1972 are registered by NASA, AEC, and DOT.

R&D Plant

Obligations for R&D plant totaled \$524 million in 1970; they were expected to reach \$659 million in 1971 but to decrease to \$588 million in 1972. Support by most agencies for R&D plant is declining or leveling off. The chief exception is provided by DOT's construction program, most of it carried out at the High-Speed Ground Test Center in Pueblo, Colo.

In 1971 almost 80 percent of the R&D plant total represented the funding of two agencies—AEC and DOD.

Performers

Federal intramural R&D performance has risen steadily year after year even at times when support to other sectors was declining. In the 1970-72 period, growth is the result of increased intramural work on the part of most of the agencies. Currently, approximately 25 percent of all Federal research and development is represented by intramural performance, a higher level than the 18- to 23-percent range that prevailed in the 1960's.

In 1971 industrial firms (including FFRDC's) were expected to account for 53 percent of all Federal R&D performance, contrasted with 62 percent in 1967. DOD, NASA, and AEC remain the chief agency contractors for industrial R&D resources.

In 1970 a 4-percent drop occurred in Federal R&D obligations to universities and colleges. However, in the next two years obligations were scheduled to rise to new highs. The share of this sector in the Federal R&D total was an estimated 11 percent in 1971.

FFRDC's administered by universities were expected to perform 5 percent of all Federal research and development in 1971, about the same share they have accounted for since 1961.

Other nonprofit institutions, including FFRDC's,

have represented about 4 percent of the total since 1965 and continue at that level in the current budget period.

Agencies

Although total Federal R&D obligations are scheduled to increase 9 percent from 1970 to 1972, two of the important R&D agencies—NASA and AEC—reveal continuing decreases.

However, NASA's estimate for 1972 represents the smallest reduction since the downward trend for this agency that started in 1967. Increases in a number of key programs—such as Skylab and the space shuttle, the Viking unmanned exploration of Mars, and the Grand Tour unmanned missions to the outer planets—almost offset decreases in the Apollo program.

AEC's decreases stem largely from cutbacks in the underground testing of nuclear weapons, in space propulsion systems, and in space electric power development.

DOD's sizable increase in 1972 covers work on the B-1 advanced strategic bomber, the Safeguard antiballistic missile system, the undersea long-range ballistic missile system (ULMS), the F-15 air superiority fighter, the A-X close air support aircraft, and the F-5 international fighter. Partially offsetting the increases are the phasing down or completion of such undertakings as the F-14 fighter/interceptor, the Minuteman ICBM system, the Poseidon fleet ballistic missile, and the S-3A antisubmarine warfare aircraft.

HEW reveals important expansion in R&D work in the current period. Increases are brought about by vocational education research and innovative R&D programs in the Office of Education, research efforts in heart disease and cancer in the National Institutes of Health, and the R&D efforts of the new Office of Child Development, to name some of the more outstanding programs.

The agencies other than the leading 4 are ex-

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pected to increase their joint share of the Federal R&D total from almost 11 percent in 1970 to 14 percent in 1972, reflecting Federal response to national needs in such areas as transportation, support of fundamental science, food production and use, environmental control, urban management, and crime abatement.

Fields of Science

Between 1970 and 1972 the relative shares of the life sciences, the environmental sciences, and the social sciences show a tendency to rise while the shares of the physical sciences and engineering tend to fall. Psychology and mathematics remain stable.

In 1971 the engineering sciences were expected to account for 34 percent of the Federal research total; the life sciences 29 percent, the physical sciences 17 percent, and the environmental sciences 11 percent. The social sciences were expected to make up 5 percent of the total, and psychology and mathematics each 2 percent.

Geographic Distribution

Federal R&D performance tends to concentrate in certain States. Five geographic surveys have been conducted, starting with 1963, and they reveal that the 10 States leading in Federal R&D support received 71 percent of the total obligations in each year surveyed—1963, 1965, 1968, 1969, and 1970. These 10 leaders were drawn from a group of the same 11 States, year after year. The three leading States in each year surveyed were California, New York, and Maryland, in that order. However, the share of California had dropped from 35 percent of the total in 1963 to 26 percent by 1970.

Approximately one-half the States received as much as 1 percent of the Federal R&D total in each year. The 26 such States in 1970 accounted for 95 percent of overall obligations.

introduction

Federal funding for research and development over the past one and one-half decades reveals a changing pattern in levels of activity. From 1955 to 1967 total Federal R&D obligations rose steadily although some weakening in public support could be detected by the mid-1960's. At that time the rate of yearly growth began to slacken and the ratio of the R&D portion of the budget to the total budget stopped rising and began to fall.

In the second half of the 1960's R&D budgets had to compete with other rapidly growing areas of Federal support, the result of increased needs in such fields as defense, education, health, and urban management. From 1967 to 1970 total Federal R&D obligations declined in absolute terms and relative to obligations for other Federal activities taken as a whole.

However, overall Federal R&D funding now shows promise of turning upward. The R&D total requested in the 1972 budget would, if realized, mark an all-time high in current dollars. To a large extent this higher figure results from recognition that research and development will have to be applied to solving a range of social problems, including the problems created by technology.

As in the past, the process of examining the relationship of science to society is continuing. Presidential study groups, congressional committees, and others in policymaking positions have been reviewing the entire organizational structure of Government science support; they have been considering how science can best meet national problems and how technological change can be better foreseen and controlled.

Bills to create technology assessment agencies have been introduced in both the House and the Senate, and the National Science Foundation has recently embarked on the RANN (Research Applied to National Needs) program, centralizing and expanding problem-focused research support. The Foundation is also encouraging research with a high potential for providing fundamental under-

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standing of relevant scientific problems, and the National Science Board of NSF has issued a report setting forth a national program to meet the environmental crisis.

In such a period of transition data are essential. They form the prime basis for analysis and for choice among alternatives. The **Federal Funds** report provides some fundamental data on agency R&D funding. In the course of time new data elements have been added to the scope of the report so that it now presents R&D and R&D plant expenditures by agency from 1940 through 1972 and R&D and R&D plant obligations, 1947 through 1972, plus R&D obligations data for the current (1970-72) period in considerable detail.

In fiscal year 1971 the establishment of the National Oceanic and Atmospheric Administration within the Department of Commerce and the Environmental Protection Agency provided new mechanisms to help meet that crisis. Such actions and the augmented program for cancer cure within the National Institutes of Health are further evidence of attempts to relate science to the needs of society. The attention of decisionmakers is also turning to ways to increase research and development in industry so that the Nation can raise economic productivity and maintain a competitive position in international markets.

This detail includes Federal R&D obligations by character of work: basic research, applied research, and development. It also covers data by performers of the work: Federal intramural, industrial firms, universities and colleges, other nonprofit institutions, FFRDC's (Federally Funded Research and Development Centers), foreign performers, and others. It includes research obligations by major and detailed fields of science. The four principal measures of R&D activity are cross-referenced in every combination permitted by the data. Obligations are given for scientific and technical information activities and the collection of general-purpose scientific data. Also in the current issue Federal R&D and R&D plant obligations by State are shown for 1970.

Another perspective on Federal R&D funding has been provided in a recent report of the National Science Foundation, **An Analysis of Federal R&D Funding by Budget Function, 1960-72** (NSF 71-25). This report took the R&D expenditure data submitted by the agencies for the Federal Funds

surveys and regrouped them by Federal budget functions and subfunctions. The study compares R&D expenditures by budget function with total Federal outlays for each function and analyzes trends and developments. It is designed to help meet the growing need for data by which to deter-

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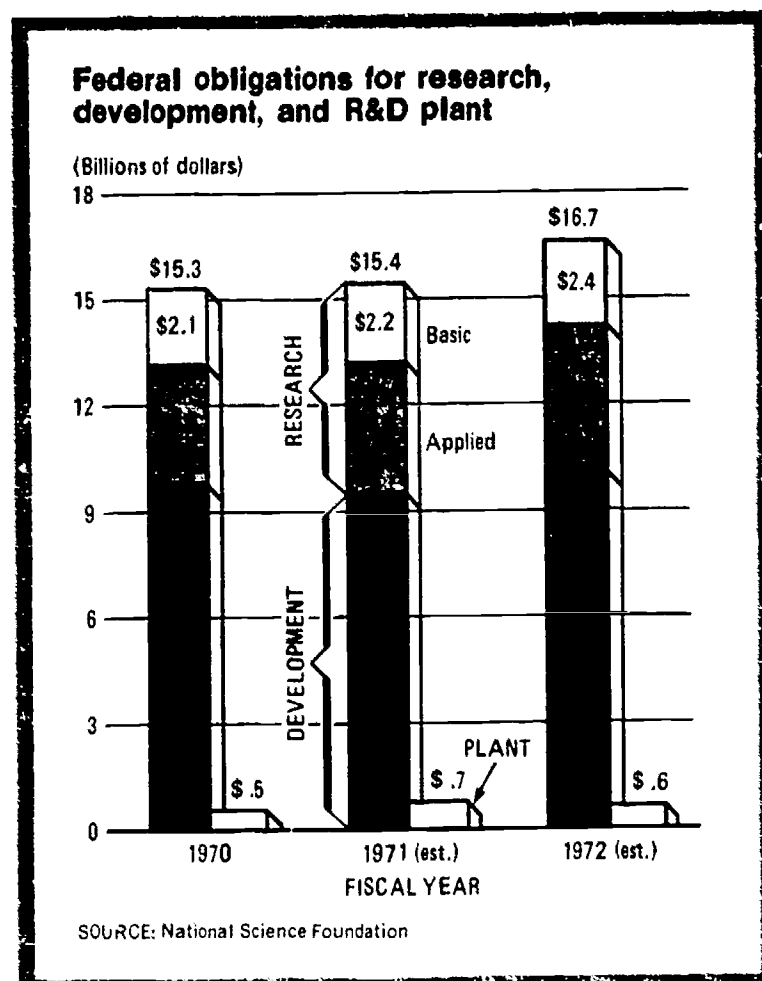
mine the adequacy of the Federal R&D effort by function in the light of national priorities. However, the distribution of that Federal effort in terms of support to kinds of work, performers of work, and fields, as well as to States, can only be found in **Federal Funds**.

PART I
FEDERAL FUNDS
FOR RESEARCH,
DEVELOPMENT, AND
R&D PLANT

SECTION 1. levels and trends

After a period of decline that began in 1968, overall Federal R&D funding appears to have reached a turning point. From 1970 to 1972 a 9-percent increase is estimated. The 1970 total of \$15.3 billion in actual obligations established a low for recent years, and the R&D total was expected to be only slightly higher in 1971 at \$15.4 billion, but the total requested in the President's budget for 1972 amounted to \$16.7 billion. If the budget request is realized, 1972 will mark a new high in current dollar funding.

If analyzed from the point of view of level of activity which can be supported by these funds, a somewhat different, though still improved, picture emerges. The use of the GNP implicit price deflator would result in a 5-percent decrease between 1970 and 1971. Fiscal year 1972 would still see an upturn even with the application of any reasonably estimated deflator. However, the use



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of such a deflator would reduce the extent of the rise and would place the 1972 total below the previous 1967 high.

R&D PLANT

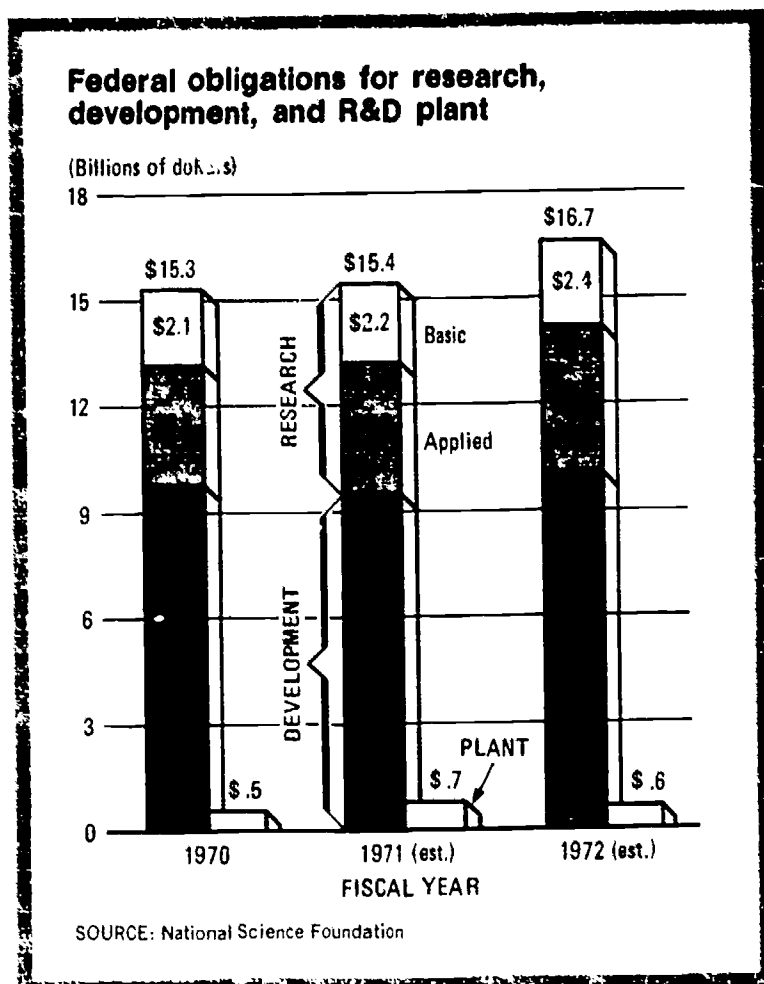
In 1970 R&D plant obligations of \$0.5 billion reached the lowest point since 1960. The estimated increase to \$0.7 billion for 1971 is not expected to be sustained in 1972; that year only \$0.6 billion in R&D plant obligations is requested. R&D plant lacks the continuity of funding evidenced by R&D programs and reveals a special vulnerability to cutbacks in periods of Government economizing.

RELATIONSHIP TO TOTAL BUDGET

The combined R&D and R&D plant obligations for 1970, 1971, and 1972 are \$15.9 billion, \$16.0 billion, and \$17.2 billion, respectively. In terms of expenditures the totals are slightly different, as the table shows. However, expenditures can be directly related to Federal budget outlays, and the R&D and R&D plant share of total budget outlays reveals a steady decline from the 1965 high of 12.6 percent to a 1972 estimate of 7.1 percent, the lowest ratio since 1959. The downward trend for the latest 2 years is a reflection of the growth of the non-R&D portion of the budget rather than a diminution in R&D programs.

TRENDS IN RESEARCH AND DEVELOPMENT

From 1960 to 1967 Federal R&D obligations grew steadily. They doubled between 1960 and 1966, more because of growth in the programs of the National Aeronautics and Space Administration (NASA) than any other single factor. Although the NASA curve began to turn down the next year, a sizable increase in R&D obligations for the Department of Defense (DOD) and smaller increases for other agencies resulted in a Federal R&D total in 1967 that was the highest yet attained. It marked the end of a long-term growth cycle.



**Federal obligations and expenditures, fiscal years
1940-72**

[Dollars in millions]

| Fiscal years | Total budget outlays ^b | Research, development, and R&D plant ^a | | |
|-------------------------------------|---|--|-------------------|--|
| | | Obliga- tions | Expendi- tures | Expendi- tures as percent of total budget outlays |
| 1940..... | \$ 9,589 | (^c) | \$ 74 | 0.8 |
| 1941..... | 13,980 | (^c) | 198 | 1.4 |
| 1942..... | 34,500 | (^c) | 280 | 0.8 |
| 1943..... | 78,909 | (^c) | 602 | 0.8 |
| 1944..... | 93,956 | (^c) | 1,377 | 1.5 |
| 1945..... | 95,184 | (^c) | 1,591 | 1.7 |
| 1946..... | 61,738 | (^c) | 918 | 1.5 |
| 1947..... | 36,931 | \$ 691 | 900 | 2.4 |
| 1948..... | 36,493 | 868 | 855 | 2.3 |
| 1949..... | 40,570 | 1,105 | 1,082 | 2.7 |
| 1950..... | 43,147 | 1,175 | 1,083 | 2.5 |
| 1951..... | 45,797 | 1,812 | 1,301 | 2.8 |
| 1952..... | 67,962 | 2,194 | 1,816 | 2.7 |
| 1953..... | 76,769 | 3,361 | 3,101 | 4.0 |
| 1954..... | 71,138 | 3,039 | 3,148 | 4.4 |
| 1955..... | 68,503 | 2,745 | 3,308 | 4.8 |
| 1956..... | 70,461 | 3,267 | 3,446 | 4.9 |
| 1957..... | 76,748 | 4,389 | 4,462 | 5.8 |
| 1958..... | 82,575 | 4,906 | 4,991 | 6.0 |
| 1959..... | 92,111 | 7,123 | 5,806 | 6.3 |
| 1960..... | 92,230 | 8,080 | 7,744 | 8.4 |
| 1961..... | 97,802 | 9,607 | 9,284 | 9.5 |
| 1962..... | 106,830 | 11,069 | 10,381 | 9.7 |
| 1963..... | 111,314 | 13,663 | 11,999 | 10.8 |
| 1964..... | 118,585 | 15,324 | 14,707 | 12.4 |
| 1965..... | 118,431 | 15,746 | 14,889 | 12.6 |
| 1966..... | 134,654 | 16,179 | 16,018 | 11.9 |
| 1967..... | 158,352 | 17,149 | 16,842 | 10.6 |
| 1968..... | 178,862 | 16,525 | 17,030 | 9.5 |
| 1969..... | 184,556 | 16,306 | 16,348 | 8.9 |
| 1970..... | 196,588 | 15,854 | 15,736 | 8.0 |
| 1971 (estimated) ^d | 212,755 | 16,046 | 15,988 | 7.5 |
| 1972 (estimated) ^d | 229,232 | 17,250 | 16,315 | * 7.1 |

^a Beginning in fiscal year 1953 amounts for both obligations and expenditures include pay and allowance of military personnel in research and development.

^b "Outlays" include expenditures plus net lending. Data through fiscal year 1953 are in terms of the "Consolidated Cash Statement" and data beginning with fiscal year 1954 are in terms of the "Unified Budget." For purposes of providing trend information the data are considered to be reported on a generally comparable basis.

^c Not available.

^d These estimates are based on amounts shown in The Budget, 1972 and do not reflect congressional appropriations or changes made by executive action subsequent to budget submission at the mid-point of fiscal 1971.

* The ratio of 7.1 percent given as the R&D portion of the Federal budget in 1972 is computed from the total budget figure of \$229 billion. In another National Science Foundation report, An Analysis of Federal R&D Funding by Budget Function, 1960-72, the ratio of the R&D portion of the 1972 budget is shown as 7.4 because the budget figure used in that study (\$211 billion) excluded interest.

NOTE: R&D data for fiscal year 1952 and subsequent years are based on surveys of the National Science Foundation. Prior data were prepared by the Bureau of the Budget. Since the NSF surveys began, agencies have submitted revised data when necessary to maintain historical comparability with reporting practices of the latest period.

Development still made up by far the largest portion of the total, but the rate of growth for research had been higher than that for development so that the development share dropped from 74 percent to 68 percent of the R&D total. Within the research total, basic research had grown more rapidly than applied research, and its share rose from 8 percent to 12 percent of the R&D total, while applied research moved only from 18 percent to 20 percent.

A decline then set in, which lasted from 1967 to 1970. Obligations for Federal research and development fell at an average annual rate of 2 percent, influenced principally by the decrease in development funding. When constant dollars are used, the average annual decline is 7 percent. The average annual rate of decline for development in those years was 5 percent. However, research obligations increased slightly, at an average rate of 2 percent per year. Only in one year (from 1968 to 1969) did research funding register a decrease, and it was relatively small. When constant dollars are used, the rate of decline for development is steeper, and research over the 1967-70 period shows a decline instead of an increase.

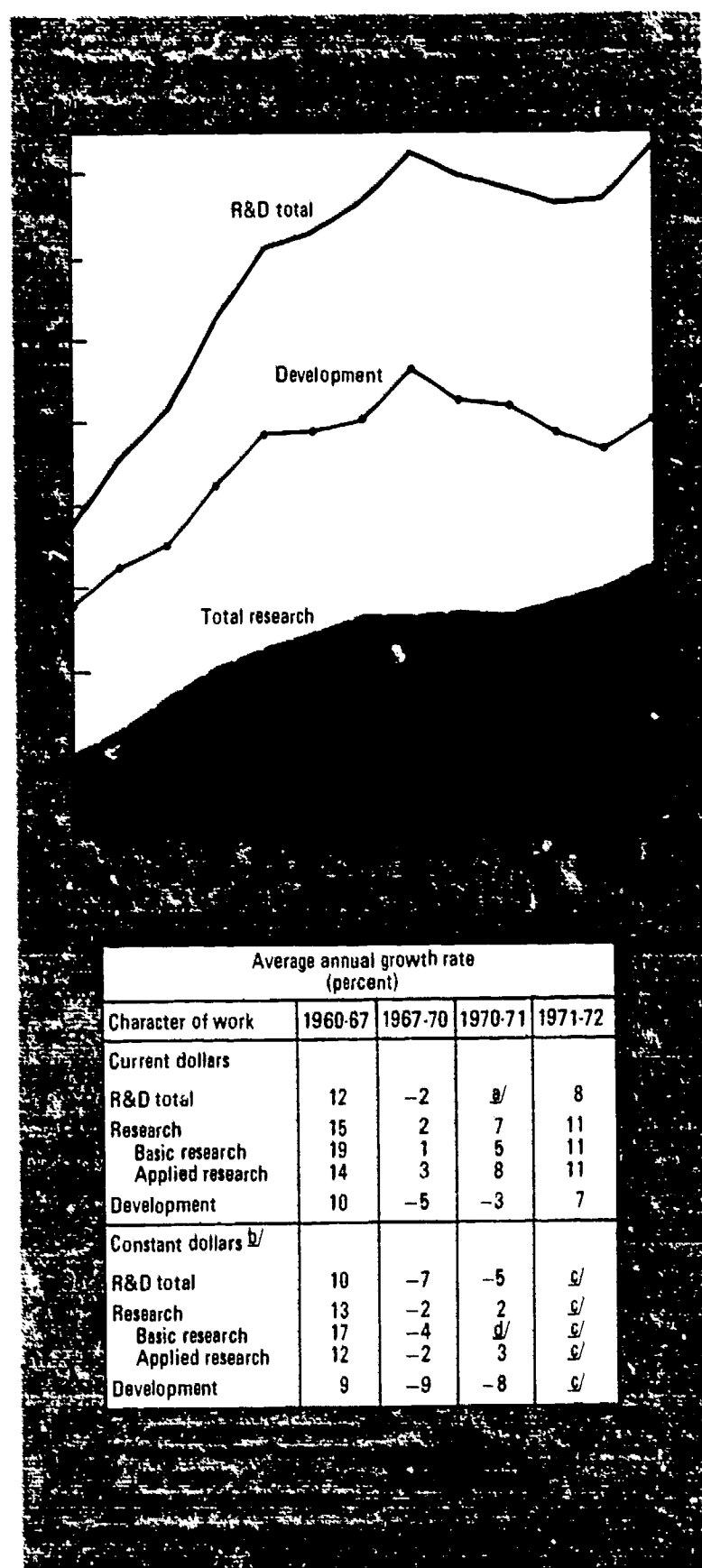
In 1971 the Federal R&D total scarcely changed. The chief retarding effect on overall R&D growth since 1967 had been caused by the heavy drop in development funding, mostly from the curtailment of NASA programs but in some years from reductions by DOD. On the other hand, research had shown an almost steady growth that was produced by the combined efforts of almost all the agencies. These included the Atomic Energy Commission (AEC) and the Department of Health, Education, and Welfare (HEW) in 1968 and 1969, DOD and NASA in 1970, and all major agencies except AEC in 1971. In 1972 NASA funding, which has so powerfully affected the R&D total since the early 1960's, shows less relative change than in any year since 1966.

LEVELS AND TRENDS

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In 1972 both research and development turn upward. However, the development share in 1972 is expected to be only 60 percent of all research and development, the lowest such share on record. Basic research and applied research are expected to be 14 percent and 26 percent, respectively.

AGENCIES

In the period from 1960 to 1972 the number of agencies reporting R&D programs has risen from 24 to 33, and certain fundamental shifts have taken place in the relative contributions of different agencies to the total Federal R&D effort. Certain agencies are associated with broad areas of R&D activity—such as weaponry, space exploration, health, atomic energy development, or the advancement of science *per se*. Their funding reflects relative national priorities at any given time.

For example, in 1960 DOD accounted for 76 percent of all the funds allotted to Federal R&D programs, but this agency is expected to represent only 50 percent by 1972. Other national needs taken together are now recognized as equaling those of the military in their claims on Federal R&D resources.

NASA rose from a share of 5 percent of the R&D total in 1960 to a high of 34 percent in 1965, but was expected to fall back to 19 percent in 1972. This agency has declined steadily in funds since 1966 as other national programs have gained acceptance over space exploration.

AEC, which was third in size of funding until 1971, has also declined relatively. AEC's share fell in the 1960–72 period from 10 percent to an anticipated 8 percent, even though R&D funding for this agency showed greater stability than for any other agency. In 1971 AEC's estimated R&D obligations were smaller than those for HEW for the first time on record. The same situation is expected to be repeated in 1972.

In 1960 the combined shares of DOD, NASA,

Federal obligations for research and development, by agency

(Dollars in millions)

| Agency | Actual | | Estimates | |
|--|---------|----------|-----------|----------|
| | 1960 | 1970 | 1971 | 1972 |
| Total..... | \$7,552 | \$15,330 | \$15,387 | \$16,662 |
| Department of Defense..... | 5,712 | 7,360 | 7,420 | 8,332 |
| National Aeronautics and Space Administration..... | 369 | 3,800 | 3,248 | 3,189 |
| Department of Health, Education, and Welfare..... | 320 | 1,221 | 1,480 | 1,635 |
| Atomic Energy Commission..... | 762 | 1,346 | 1,307 | 1,251 |
| Department of Transportation..... | | 317 | 437 | 483 |
| National Science Foundation..... | 75 | 289 | 345 | 494 |
| Department of Agriculture..... | 126 | 281 | 303 | 314 |
| Department of the Interior..... | 64 | 158 | 185 | 204 |
| Department of Commerce..... | 31 | 122 | 158 | 182 |
| Environmental Protection Agency..... | | 89 | 116 | 144 |
| Office of Economic Opportunity..... | | 123 | 116 | 100 |
| Other agencies..... | 94 | 224 | 272 | 334 |

and AEC represented 91 percent of the Federal R&D total, most of it directed to development. But gradually the size of their combined share has dropped so that in 1972 it is expected to make up 77 percent of all Federal R&D obligations.

In the current period, the programs of these three agencies still revolve largely round the development of heavy machinery, costly equipment, and complex instrumentation. DOD is the only one to show an actual increase in obligations from 1970 to 1972, and a large portion of this increase is in aircraft development, e.g., naval aircraft, the Air Force F-15, the B-1 advanced strategic bomber, the F-5 fighter, and a range of helicopters; another large portion in ships, e.g., hydrofoil craft, antisubmarine warfare sensors, shipboard tactical communications, etc.; and another portion in "other" equipment, including the Airborne Warning and Control System, electronic warfare countermeasures, and undersea surveillance systems. NASA shows a sizable decrease in the current period, which was largely realized in 1971 as the Apollo development program phased out. Final phaseout for Apollo and reduced development of the NERVA engine in 1972 are expected to be nearly offset by increases

**Federal obligations for research and development,
by agency**

[Dollars in millions]

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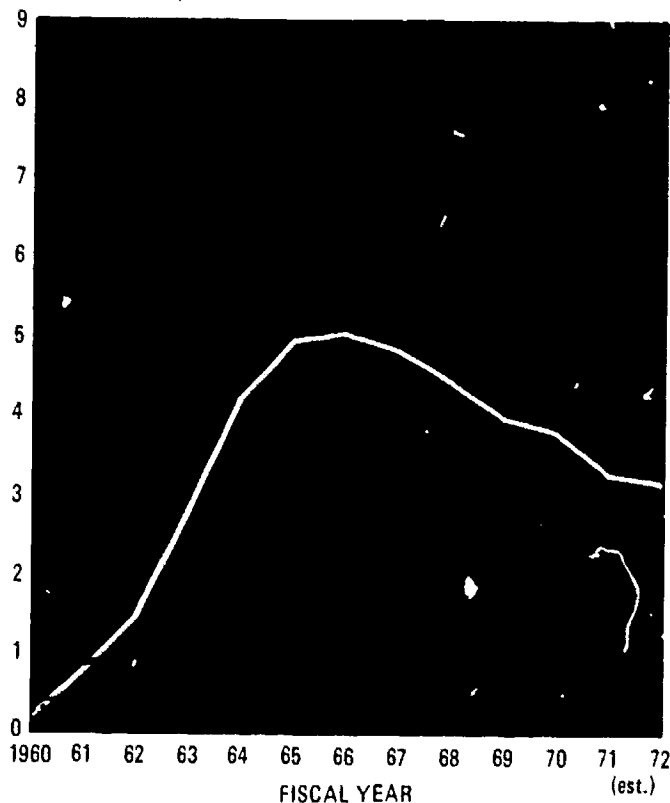
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in other NASA programs, such as the earth orbital workshop, space stations, and development of a space shuttle vehicle, so that 1972 almost represents a leveling off. In the case of AEC, the downward trend from 1970 to 1972 results from reduced underground testing of nuclear weapons, reductions in the NERVA nuclear rocket engine program, and less emphasis on development of small electric power systems for space use.

As DOD, NASA, and AEC have undergone a decline in their joint share of the Federal R&D total, other agencies have increased their shares accordingly. HEW, which has experienced an almost continual rise in funds in the 1960-72 timespan, reflects an expansion in its share from 4 percent to 10 percent. This growth is indicative of the rising public interest in better health and education services. In the current period some of

**Trends in Federal R&D obligations for agencies
leading in R&D programs**

(Billions of dollars)



SOURCE: National Science Foundation

HEW's chief areas of R&D expansion are cancer, heart and lung diseases, child development, and eye research, and R&D programs for educating the handicapped and those who need vocational training.

Only in recent years has the aggregate R&D growth of the remaining agencies—other than DOD, NASA, HEW, and AEC—been sizable in dollar terms. It is significant that since 1968 their combined obligation total has shown important annual increases even when the Federal R&D total was declining. These agencies have also exerted an increasing upward pressure on the research curve.

The "other agency" group increased its share from 5 percent of the Federal R&D total in 1960 to an estimated 14 percent in 1972, and 3 percentage points are expected to be gained in the current period alone. From 1970 onward the combined obligations for the 29 "other" agencies are clearly higher than the totals for either HEW or AEC (as had not been the case previously), and the upward trend for these agencies appears to be established. It reflects Federal response to national needs in such areas as transportation, support of fundamental science, food production and use, environmental control, urban management, and crime abatement, to name some of the more notable ones.

The agencies that are chiefly responsible for the significant rise in the share of this group are the Department of Transportation (DOT), National Science Foundation (NSF), the Departments of Agriculture (USDA), the Interior, and Commerce, the new Environmental Protection Agency (EPA), the Postal Service, the Department of Housing and Urban Development (HUD), and the Department of Justice. These agencies have all scheduled important increases in 1972 R&D programs compared with 1970.¹

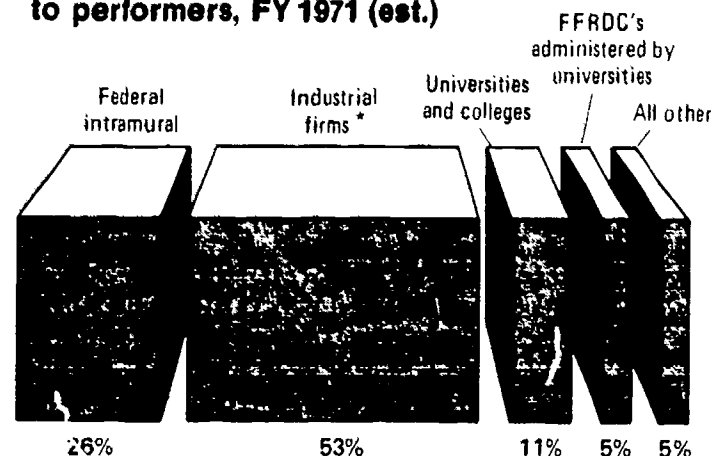
¹ Data do not reflect congressional action on the SST (within DOT) for the last 3 months of fiscal year 1971 or any action for 1972.

PERFORMERS

The Federal intramural sector continues to grow moderately in the performance of Federal R&D work. In the current period this sector's share of all performance is approximately 25 percent, a higher level than at any time since the end of the 1950's. Not only has the share-of-total increased but absolute dollars for R&D work conducted by Federal personnel have also grown in every year of the series, even in the years after 1967 when the overall Federal effort was declining. It should be noted that intramural performance includes, in addition to direct R&D work, costs for Federal personnel engaged in planning and administering intramural and extramural programs.

Extramurally, the principal performing sector continues to be industry. In 1971, however, the share of R&D work performed by industrial firms (including industrially administered FFRDC's) fell to an estimated 53 percent of the Federal R&D total, the lowest since 1956. This downward shift is a direct reflection of the cutbacks in NASA and AEC development programs, largely carried out by industrial performers. The estimated industry share for 1972 will rise to 54 percent

Federal R&D obligations to performers, FY 1971 (est.)



* includes Federally Funded Research and Development Centers (FFRDC's) administered by industrial firms.

SOURCE: National Science Foundation

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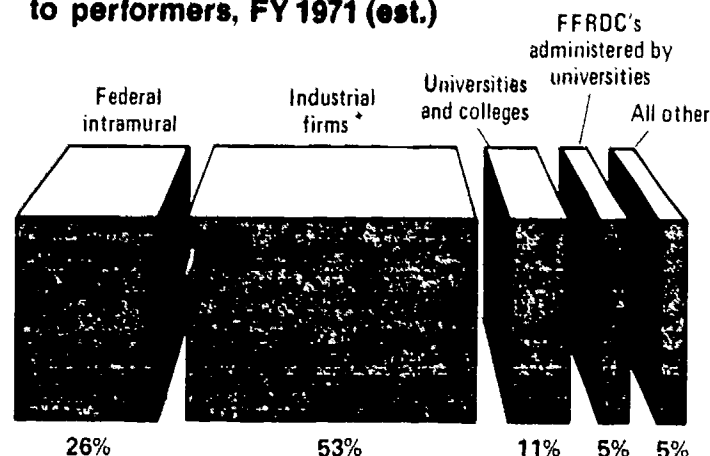
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Federal R&D obligations to performers, FY 1971 (est.)



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SOURCE: National Science Foundation

LEVELS AND TRENDS

because of the important rise in DOD development programs, well surpassing the continued declines planned by NASA and AEC. There will also be some increased contracts to industry from agencies working on environmental problems.

The university and college share of the Federal performance total has risen from 6 percent in 1960 to an estimated 11 percent for 1971 and 1972. This rise in the ratio is consistent with the rise of research programs, both basic and applied, within the budgets of an increasing number of Federal agencies. FFRDC's administered by universities were expected to perform 5 percent of all Federal research and development in 1971, about the same share they have accounted for since 1961.

Other nonprofit institutions (including FFRDC's) have represented about 4 percent of the total since 1965 and continue at that level in the current budget period.

FIELDS OF SCIENCE

A summary of broad changes since 1960 in the relative emphasis on major fields of science within the federally supported research total is shown below:

| Field of Science | Research obligations | |
|-----------------------------|----------------------|-------------|
| | 1960 | 1971 (est.) |
| Total (millions of dollars) | \$1,941 | \$5,995 |
| | Percent Distribution | |
| Life sciences | 26 | 29 |
| Psychology | 2 | 2 |
| Physical sciences* | 31 | 17 |
| Environmental sciences* | 1 | 11 |
| Mathematics | 1 | 2 |
| Engineering | 36 | 34 |
| Social sciences | 2 | 5 |
| Other sciences | 2 | 1 |

* Physical sciences and environmental sciences were not separately identified prior to 1967.

Among the more important shifts since 1960 are the rise in the share of the life sciences (supported mainly by HEW, USDA, and NASA) and the decline in the combined share of the physical and environmental sciences. The latter fields together received 28 percent of all research support in 1971, compared with 31 percent in

1960. The comparable share was as high as 36 percent in 1964. At present the physical sciences are supported chiefly by NASA, AEC, and DOD, and the environmental sciences are supported mostly by NASA and DOD.

Another significant change since 1960 has been the substantial increase in the share of the social sciences, from 2 percent of the research total to a current 5 percent. The social sciences are chiefly supported by HEW, Office of Economic Opportunity (OEO), USDA, and NSF. In contrast, the share of the engineering sciences, funded primarily by DOD and NASA, has fallen somewhat.

The relative positions of the fields tend to shift somewhat from year to year, and shifts do not always continue steadily in the same direction. However, dollar support to all the major fields has increased considerably over the 1960-72 timespan.

Geographic Distribution

This report includes a survey of the geographic distribution of actual Federal R&D obli-

gations for 1970, the fifth such study to be made.² It now becomes increasingly possible to observe certain constants in the Federal R&D funding pattern by States.

For example, in all years of these surveys—1963, 1965, 1968, 1969, and 1970—the 10 States leading in Federal R&D support received 71 percent of the total obligations. In all the years studied, 11 States composed a group from which the “leading 10” were derived. The order of the leading 10 tended to change from one year to another, but between 1969 and 1970 there was no change at all. California, New York, and Maryland were always the three leading States, and in that order. However, California’s share, at 35 percent of the Federal total in 1963, had declined to 26 percent by 1970.

In 1970 more than \$100 million each in Federal R&D obligations was received by 23 States, while 26 States each received as much as 1 percent of the total on a rounded basis, almost the same situation as in 1963, 1965, 1968, and 1969. The one-half of all States that are the Federal R&D leaders tend to be the same States year

² In 1970 ten agencies were surveyed, representing 98 percent of total Federal R&D obligations in that year. They were DOD, NASA, AEC, HEW, DOT, NSF, USDA, Interior, OEO, and Commerce.

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after year. Once the various resources of a State
are used for R&D performance, they are likely
to become better organized for future R&D per-
formance and in this way a capability is built that
tends to grow. Often the performance of Federal
R&D work by a performer in a given location en-
courages the rise of different types of performers
nearby. Thus, R&D firms have grown up near Fed-
eral laboratories and test facilities, and university-
run FFRDC's have been located near administer-
ing universities.

Most States that are heavily engaged in Fed-
eral R&D work are highly industrialized and con-
tain aircraft and electronics manufacturing firms,
electrical equipment and communications firms,
machinery and chemical producers. Also, most of
the States leading in Federal R&D support to in-
dustrial firms show strength in other performer
categories; they are among the leaders in Federal
R&D support to universities, to other nonprofit
institutions, and to Federal intramural centers.

However, when funding is analyzed on a per-
former basis among the less supported States
(below the leading 10 or 15), universities and col-
leges are likely to represent the most actively
used sector because Federal R&D support to this
kind of performer is more widely dispersed than
to others.

SECTION 2. basic research

Basic research is systematic, intensive study directed toward fuller scientific knowledge or understanding of the subject studied, in which the investigator is motivated primarily by the desire to pursue knowledge for its own sake. It is generally free from the need to meet immediate objectives and tends to explore a broad field, seeking to increase the understanding of natural laws.

The span of basic research covers investigations in which the new knowledge itself is the major goal as well as studies in which the new understanding is regarded as part of the groundwork for subsequent applications to further economic growth, national defense, or the solution of social and other problems.

Universities and colleges account for more than one-half of all the basic research performed in the United States, and the close relationship of such work to the education and training of scientists and engineers is a key aspect of academic science.

THE CURRENT PERIOD

The status of the Federal basic research effort from 1969

Federal obligations for basic research

(Dollars in millions)

| Agency | 1969 |
|--|---------|
| Total..... | \$2,094 |
| National Aeronautics and Space Administration..... | 678 |
| Department of Health, Education, and Welfare..... | 371 |
| National Science Foundation..... | 248 |
| Atomic Energy Commission..... | 285 |
| Department of Defense..... | 276 |
| Other agencies..... | 236 |

- In 1970, for the first time in 15 years, total Federal support for basic research declined, mostly reflecting the drop in funding for NASA and, secondarily, a decrease for DOD.
- In 1971, while NASA continued to drop, HEW and NSF made impressive gains in their basic research programs, and the overall upward trend was resumed.

BASIC RESEARCH

THE CURRENT PERIOD

The status of the Federal basic research effort from 1969 to 1972 is as follows:

Federal obligations for basic research, by agency

(Dollars in millions)

| Agency | Actual | | | Estimates | | | |
|--|---------|---------|------------------------|-----------|------------------------|---------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total..... | \$2,094 | \$2,062 | -1.5 | \$2,165 | +5.0 | \$2,399 | +10.8 |
| National Aeronautics and Space Administration..... | 678 | 637 | -6.0 | 626 | -1.7 | 688 | +9.9 |
| Department of Health, Education, and Welfare..... | 371 | 388 | +4.6 | 452 | +16.5 | 488 | +8.0 |
| National Science Foundation..... | 248 | 245 | -1.2 | 285 | +16.3 | 400 | +40.4 |
| Atomic Energy Commission..... | 285 | 287 | +0.7 | 278 | -3.1 | 266 | -4.3 |
| Department of Defense..... | 276 | 247 | -10.5 | 243 | -1.6 | 245 | +0.8 |
| Other agencies..... | 236 | 258 | +9.3 | 281 | +8.9 | 312 | +11.0 |

- In 1970, for the first time in 15 years, total Federal support for basic research declined, mostly reflecting the drop in funding for NASA and, secondarily, a decrease for DOD.
- In 1971, while NASA continued to drop, HEW and NSF made impressive gains in their basic research programs, and the overall upward trend was resumed.

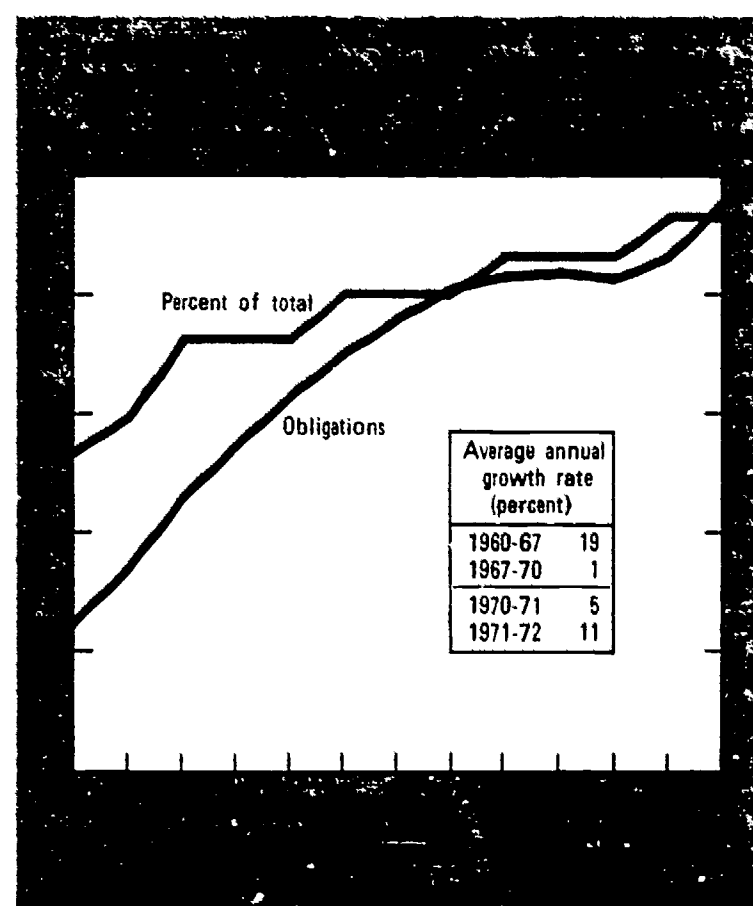
- The 1972 total showed a significant gain, primarily engendered by NSF, NASA, and HEW, although all agencies except AEC reported increases in basic research.
- Eleven agencies other than the leading five sponsored basic research programs in the current period. They accounted for 13 percent of the total in 1971.

TRENDS

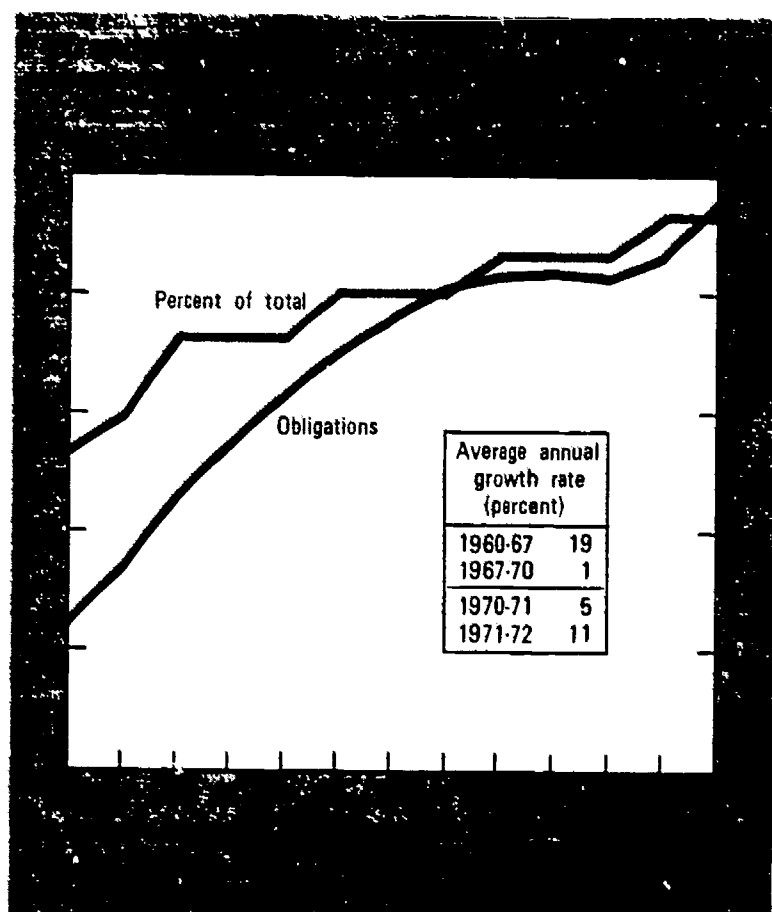
- Basic research has shown a more consistent growth trend than the Federal R&D total. From 1960 to 1967 its 19-percent average annual rise was much more rapid than the 12-percent rise for research and development as a whole; from 1967 to 1970, while the R&D total was falling, basic research held to almost the same yearly level.
- In the current period basic research has resumed an upward pace. In both 1971 and 1972 it was expected to grow faster than overall research and development.
- The share of basic research in the Federal R&D total will have risen from 8 percent in 1960 to an estimated 14 percent in 1972. In recent years this rise was due more to a decrease in development funding than a rise in basic research funding until 1971 and 1972 when the rise in basic research dollars was more influential in increasing the basic research share.

AGENCIES

- Five agencies—NASA, HEW, NSF, AEC, and DOD—accounted for 89 percent of the total in 1960, and again in 1967, but 87 percent in 1971. However, the relative shares of their individual programs varied from one year to another.
- NASA has led since 1961 in basic research support, and usually by a wide margin, although its share of the Federal total has dropped somewhat in recent years. The high point was 33 percent in 1964, but the share was an estimated 29 percent in 1971.
- The chief reason for NASA's high level of basic research support lies in the nature of its experiments, which call for large outlays for expendable equipment, such as launch vehicles and spacecraft.

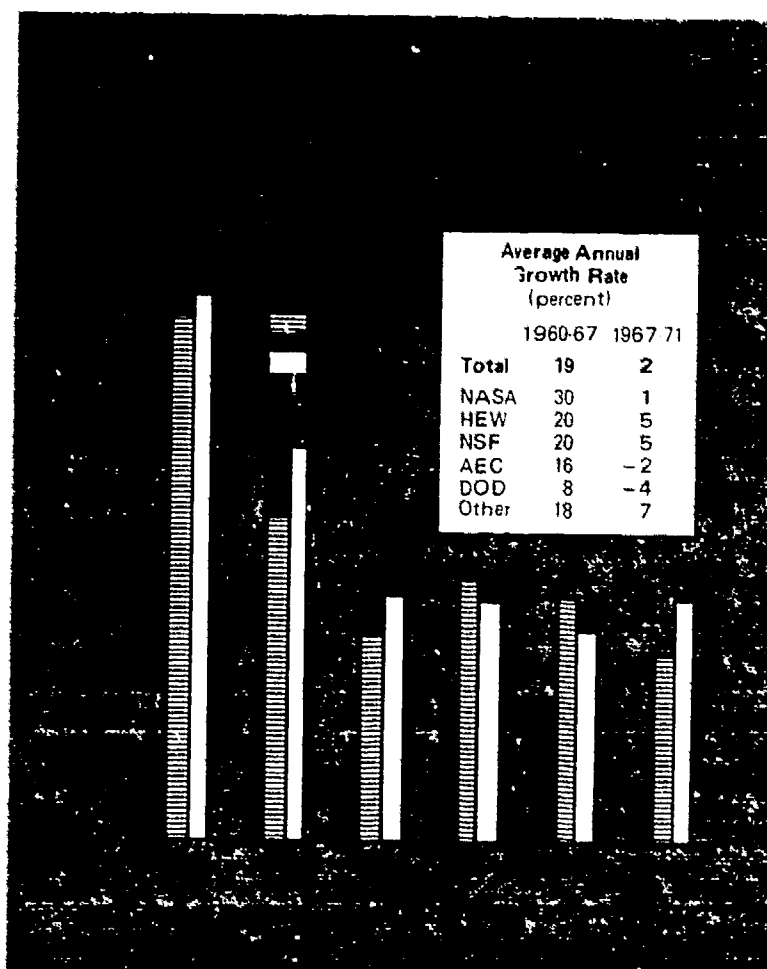


- 1970 was the first year since 1960 that NASA's basic research obligations dropped; they were expected to fall somewhat further in 1971 but to rise again in 1972 to the highest level on record.
- DOD was the leading basic research support agency in 1960, but from 1963 through 1970 it was in an intermediate position, and in 1971 and 1972 DOD was expected to account for the smallest basic research effort of the five leading agencies.
- Since 1963 HEW has been the second largest supporter of basic research. Its programs cover fundamental research investigations in the important branches of biomedicine and health. From 1960 to 1967 its average annual growth rate was second only to that of NASA and equal to that of NSF. From 1967 to 1971 HEW shared with NSF the highest rate of growth among the leading agencies.

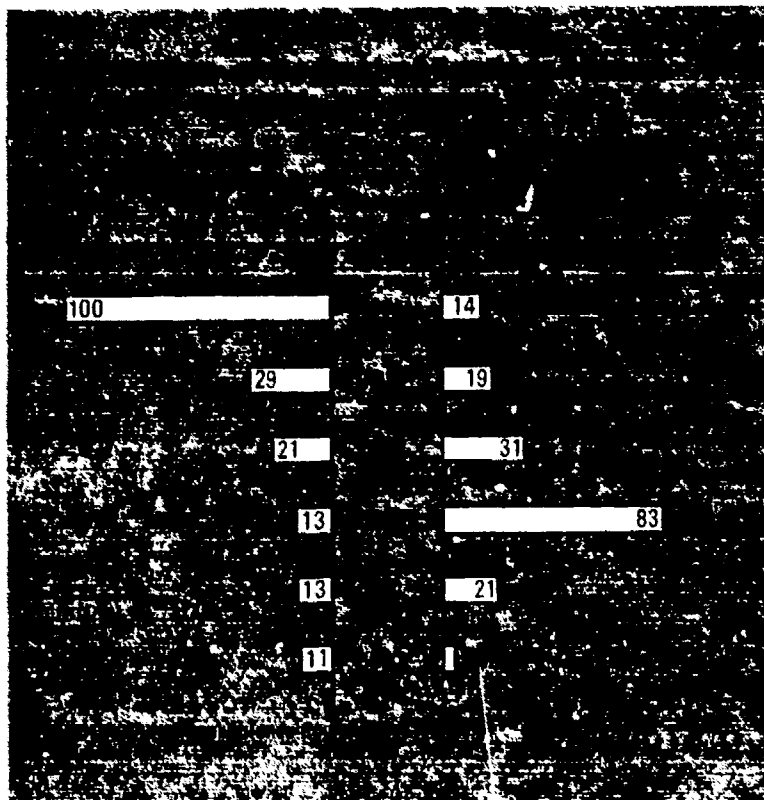


- NSF, which matched the growth rate of HEW from 1960 to 1971, fosters the extension of knowledge in every scientific field, mostly through grants to universities and colleges. In the current period NSF has taken on certain of the basic research programs relinquished for policy reasons by DOD and other agencies.
- AEC has continued to carry on basic research activities in support of its total mission of exploring atomic energy and developing uses for it. But in 1971 and 1972, its programs decreased slightly, and in 1972 AEC is expected to be the sole agency with reduced basic research support.
- Certain of the other agencies reflect important increases between 1970 and 1972; they are Commerce, USDA, and the Smithsonian.

- 1970 was the first year since 1960 that NASA's basic research obligations dropped; they were expected to fall somewhat further in 1971 but to rise again in 1972 to the highest level on record.
- DOD was the leading basic research support agency in 1960, but from 1963 through 1970 it was in an intermediate position, and in 1971 and 1972 DOD was expected to account for the smallest basic research effort of the five leading agencies.
- Since 1963 HEW has been the second largest supporter of basic research. Its programs cover fundamental research investigations in the important branches of biomedicine and health. From 1960 to 1967 its average annual growth rate was second only to that of NASA and equal to that of NSF. From 1967 to 1971 HEW shared with NSF the highest rate of growth among the leading agencies.



- The share of basic research in agency R&D budgets varies widely. DOD, for example, devoted 3 percent of its R&D budget to basic research in 1971; NSF, 83 percent; and NASA, 19 percent. The Smithsonian was the only agency to direct 100 percent of its effort to basic research. Special factors related to program objectives and missions determine the role each agency assigns to basic research.



PERFORMERS

- Federal basic research work is directed to every type of performer and Federal intramural organizations account for the bulk of the

Federal obligations for basic research, by performer
[Dollars in millions]

| Performer | Actual | |
|---|---------|---------|
| | 1969 | 1970 |
| Total..... | \$2,094 | \$2,061 |
| Federal intramural..... | 577 | 658 |
| Industrial firms *..... | 399 | 320 |
| Universities and colleges..... | 766 | 718 |
| FFRDC's administered by universities..... | 255 | 267 |
| Other nonprofit institutions *..... | 73 | 61 |
| Other..... | 25 | 35 |

* Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

- All sectors received increased funding in 1971, and most of them showed even greater increases in funding for 1972.
- The 1972 anticipated increase in basic research obligations to universities and colleges is the largest dollar increase for any performing sector. It primarily reflects a rise in NSF support.
- Since 1961 HEW has been the leading support agency for Federal basic research at universities and colleges, through grants in biomedicine, mental health, and related areas. In 1972, however, NSF is scheduled to become the chief agency in basic research support to this sector.
- The NSF funding increase to universities and colleges includes high-priority research projects dropped by other agencies as well as other basic research programs. These include basic research work within the RANN (Research Applied to National Needs) program and research with a high potential for providing a fundamental understanding of relevant scientific problems.
- Intramural research at NASA supports the current effort to 27 percent of the total.
- DOD's assignment of current research between the two sectors is that with a ship to ment.
- For the NASA support an increase for 1972 lab and Outer entire from

BASIC RESEARCH

PERFORMERS

- Federal basic research work is directed to every type of performer, although universities and colleges and Federal intramural organizations account for the bulk of the effort.

Federal obligations for basic research, by performer

[Dollars in millions]

| Performer | Actual | | | Estimates | | | |
|---|---------|---------|------------------------|-----------|------------------------|---------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total..... | \$2,094 | \$2,062 | -1.5 | \$2,165 | +5.0 | \$2,399 | +10.8 |
| Federal intramural..... | 577 | 658 | +14.0 | 669 | +1.7 | 705 | +5.4 |
| Industrial firms * | 399 | 320 | -19.8 | 351 | +9.7 | 434 | +23.6 |
| Universities and colleges..... | 766 | 718 | -6.3 | 744 | +3.6 | 843 | +13.3 |
| FFRDC's administered by universities..... | 255 | 267 | +4.7 | 283 | +6.0 | 286 | +1.1 |
| Other nonprofit institutions * | 73 | 63 | -13.7 | 69 | +9.5 | 76 | +10.1 |
| Other..... | 25 | 35 | +40.0 | 49 | +40.0 | 55 | +12.2 |

* Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

- All sectors received increased funding in 1971, and most of them showed even greater increases in funding for 1972.
- The 1972 anticipated increase in basic research obligations to universities and colleges is the largest dollar increase for any performing sector. It primarily reflects a rise in NSF support.
- Since 1961 HEW has been the leading support agency for Federal basic research at universities and colleges, through grants in biomedicine, mental health, and related areas. In 1972, however, NSF is scheduled to become the chief agency in basic research support to this sector.
- The NSF funding increase to universities and colleges includes high-priority research projects dropped by other agencies as well as other basic research programs. These include basic research work within the RANN (Research Applied to National Needs) program and research with a high potential for providing a fundamental understanding of relevant scientific problems.
- Intramural performance, second in size of basic research effort, rose in 1970, 1971, and 1972. NASA continues to be the largest intramural supporter, but was scheduled for reduction in the current period with its share of the intramural total dropping from 36 percent in 1970 to 27 percent in 1972.
- DOD's basic research programs were formerly assigned for the most part to universities, but currently they are almost equally divided between the intramural and university sectors. The reduction in university support largely reflects DOD's recent limitation on basic research to that which has a direct and apparent relationship to a mission or function of the Department.
- For the third largest sector, industrial firms, NASA is by far the leading basic research support agency. This agency scheduled a moderate increase for 1971 and an important increase for 1972, primarily related to work on the Skylab and VIKING projects and to initiation of the Outer Planets/Grand Tour project. Almost the entire industry gain for 1972 will be derived from NASA programs.

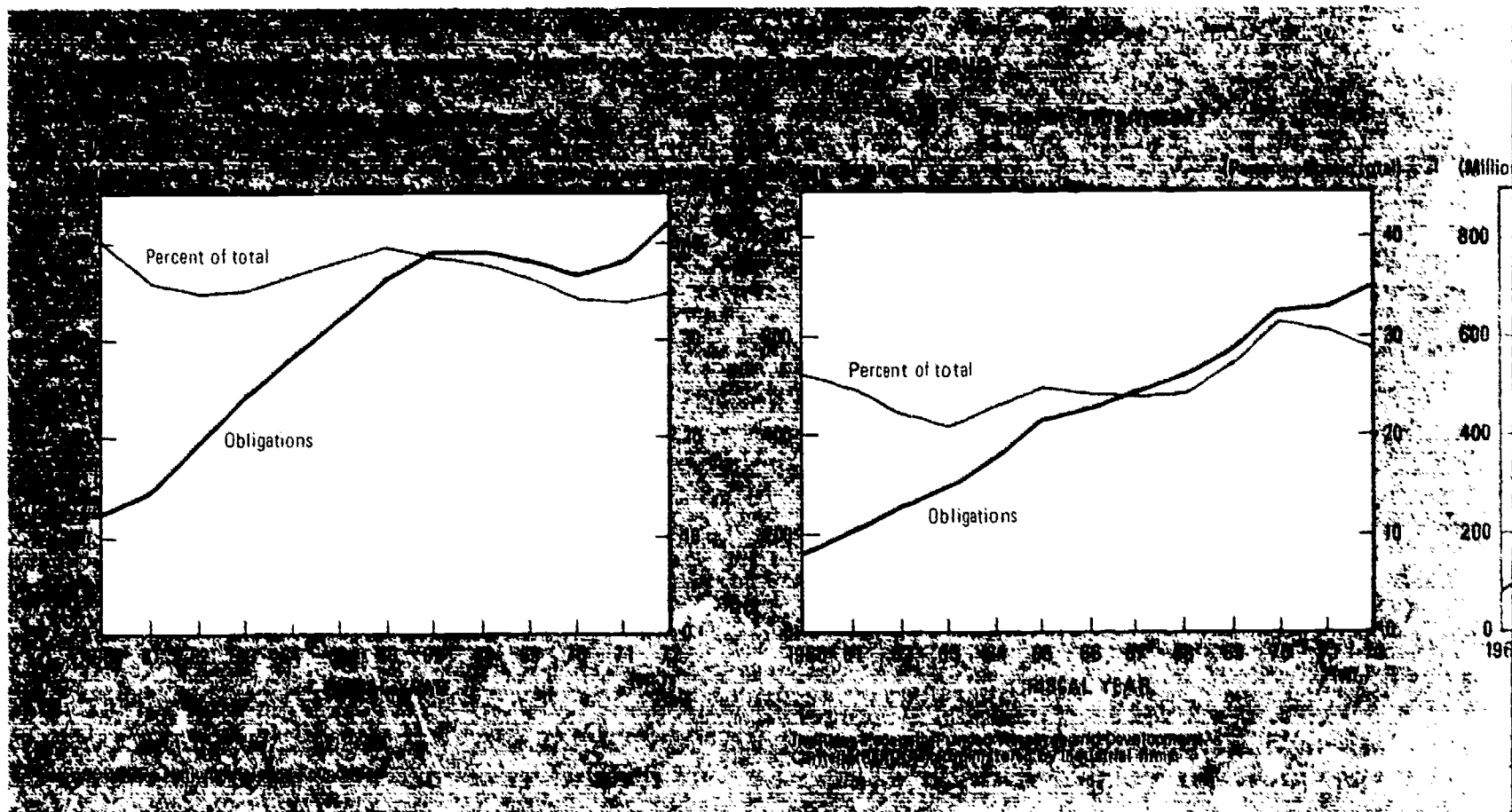
Federal obligations for basic research, by performer and agency, FY 1971 (est.)

[Dollars in millions]

| | NASA | HEW | NSF | AEC | DOD | OTHER |
|--|------|-----|-----|-----|-----|-------|
| Federal intramural | 198 | 134 | 18 | 1 | 101 | 217 |
| Industrial firms | 290 | 4 | 2 | 1 | 22 | 2 |
| FFRDC's administered by industrial firms | a | — | 1 | 29 | — | — |
| Universities and colleges | 51 | 248 | 217 | 74 | 111 | 43 |
| FFRDC's administered by universities | 79 | 2 | 31 | 170 | 1 | — |
| Other nonprofit institutions | 7 | 39 | 10 | 2 | 5 | 3 |
| FFRDC's administered by other nonprofit institutions | a | a | a | 1 | 1 | 1 |
| Other | a | 24 | 6 | a | 1 | 18 |

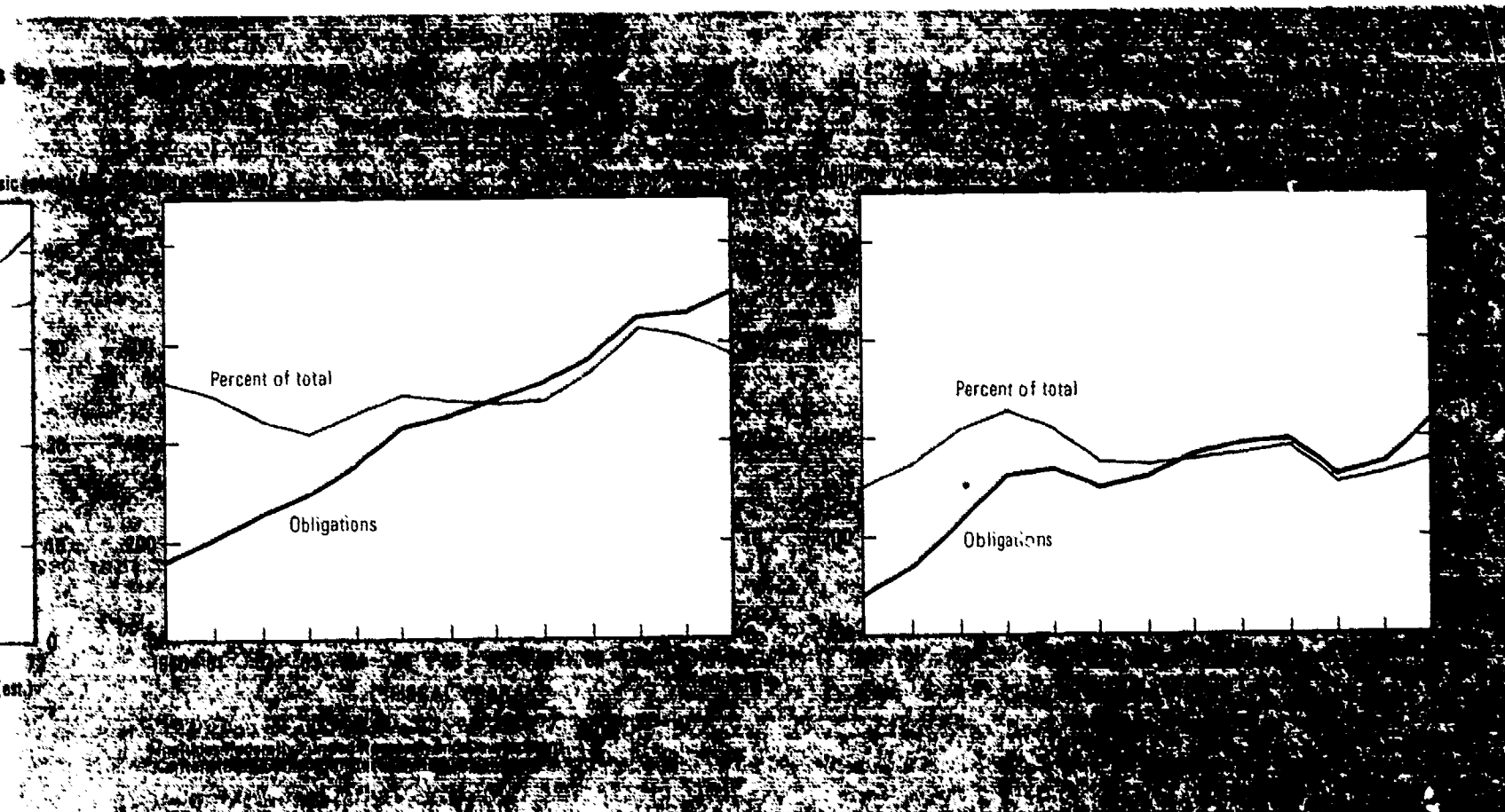
^a/ Less than \$500,000.

- NASA is the only agency where the chief performing sector is industry. NASA also uses its own facilities and personnel extensively and is the leading agency supporter of intramural work.
- For HEW, NSF, and DOD, universities and colleges do more basic research than any other sector.
- In the case of AEC, university-administered FFRDC's receive more support than universities and colleges proper, which are next in use, and industry-administered FFRDC's receive the third largest amount of support.
- For agencies with smaller basic research programs, the Federal intramural sector usually accounts for the bulk of the work.



- The share of the basic research total performed by the university and college sector has dropped from 40 percent in 1960 to 34 percent in 1971. However, this sector remains the leading one since the university atmosphere is more conducive than any other to the conduct of basic research.
- The Federal intramural share of the total has tended to increase since 1960, from 26 percent that year to 31 percent in 1971, due primarily to increased work on the part of NASA, next, to the growth of in-house work on the part of HEW and, lastly, to increased effort by agencies other than DOD, NASA, AEC, and HEW.

BASIC RESEARCH



- The Federal intramural share of the total has tended to increase since 1960, from 26 percent that year to 31 percent in 1971, due primarily to increased work on the part of NASA, next, to the growth of in-house work on the part of HEW and, lastly, to increased effort by agencies other than DOD, NASA, AEC, and HEW.

- Industrial performance of basic research rose from 15 percent of the total in 1960 to a high of 23 percent in 1963, but in 1971 it was expected to be 16 percent. The whole trend of industrially performed basic research has been strongly influenced by NASA, which accounts for 80 to 90 percent of the total for this sector. The somewhat higher estimated industry share for 1972 is almost entirely due to the NASA increase.

FIELDS

- In the current period the distribution of the Federal basic research effort by fields of science is as follows:

Federal obligations for basic research, by field of science
[Dollars in millions]

| Field of science | Actual | | Estimates | | | |
|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1970 | | 1971 | | 1972 | |
| | Ob- liga- tions | Per- cent share | Ob- liga- tions | Per- cent share | Ob- liga- tions | Per- cent share |
| Total..... | \$2,062 | 100 | \$2,165 | 100 | \$2,399 | 100 |
| Life sciences..... | 577 | 28 | 631 | 29 | 735 | 31 |
| Psychology..... | 57 | 3 | 60 | 3 | 66 | 3 |
| Physical sciences..... | 704 | 34 | 726 | 34 | 730 | 30 |
| Astronomy..... | 204 | 10 | 214 | 10 | 189 | 8 |
| Chemistry..... | 143 | 7 | 145 | 7 | 187 | 8 |
| Physics..... | 353 | 17 | 358 | 17 | 352 | 15 |
| Other..... | 5 | (*) | 8 | (*) | 2 | (*) |
| Environmental sciences..... | 352 | 17 | 362 | 17 | 419 | 17 |
| Atmospheric sciences..... | 173 | 8 | 173 | 8 | 198 | 8 |
| Geological sciences..... | 124 | 6 | 122 | 6 | 141 | 6 |
| Oceanography..... | 55 | 3 | 62 | 3 | 75 | 3 |
| Other..... | | | 5 | (*) | 5 | (*) |
| Mathematics..... | 59 | 3 | 53 | 2 | 58 | 2 |
| Engineering..... | 243 | 12 | 240 | 11 | 248 | 10 |
| Social sciences..... | 66 | 3 | 81 | 4 | 100 | 4 |
| Other sciences..... | 4 | (*) | 12 | 1 | 43 | 2 |

* Less than 0.5 percent.

- The physical sciences in 1971 were expected to account for 34 percent of total basic research funds, chiefly from NASA and AEC, and the environmental sciences for 17 percent, mainly from NASA. Their combined total of 51 percent compares with 52 percent for the same fields in 1960. (They were not separately identified prior to 1967.)
- Obligations to the life sciences amounted to 29 percent of the total in 1971; more than one-half of these obligations were scheduled by HEW. Obligations to the life sciences in 1960 were 28 percent of the basic research total.
- The engineering sciences made up 11 percent, compared with 13 percent in 1960, and were primarily supported by NASA and DOD.
- The social sciences represented 4 percent of the total in 1971, up from 1 percent in 1960, with HEW and NSF the principal agency supporters.
- The psychological sciences accounted for 3 percent of the total in 1971 and the mathematical sciences 2 percent, about the same respective shares as they represented in 1960.

(For detailed data on this section see appendix tables C-29 through C-47, C-76, C-77, C-79, C-89, C-100, C-105, and C-109.)

SECTION 3. applied research

Applied research is systematic, intensive study to reach fuller knowledge or understanding concerning the means by which a recognized need may be met. Applied research draws upon the existing knowledge created by basic research and in its turn creates additional knowledge. It differs from basic research in that it concentrates in limited areas and is pointed toward specific practical ends rather than toward investigation for its own sake. In the course of applied research activities the first steps are taken to reduce an abstract idea to a useful purpose, frequently as a forerunner to development.

THE CURRENT PERIOD

Changes in applied research obligations in the current period

Federal obligations for applied research

[Dollars in millions]

| Agency | 1969 | As a percentage of total |
|--|---------|--------------------------|
| | | |
| Total..... | \$3,145 | 100 |
| Department of Defense..... | 1,135 | 36 |
| Department of Health, Education, and Welfare..... | 803 | 26 |
| National Aeronautics and Space Administration..... | 618 | 20 |
| Department of Agriculture..... | 145 | 5 |
| Atomic Energy Commission..... | 132 | 4 |
| Department of Transportation..... | 51 | 2 |
| Department of the Interior..... | 109 | 3 |
| Department of Commerce..... | 29 | 1 |
| Environmental Protection Agency..... | 43 | 1 |
| Veterans Administration..... | 11 | 0 |
| National Science Foundation..... | 11 | 0 |
| Office of Economic Opportunity..... | 16 | 0 |
| Department of State..... | 42 | 1 |
| Other agencies..... | | |

- The 1969-72 period indicates a steady rise in total applied research obligations after an almost 5-percent decline from 1968 to 1969. Nearly all agencies were expected to contribute to this growth.
- In 1970 the important growth in applied research derives more from growth for DOD than any other agency, although the only agencies to experience significant reductions were HEW and Interior.
- The decrease for Interior was entirely due to the transfer of the Bureau of Commercial Fisheries to the National Oceanic and Atmospheric Administration (NOAA) within Commerce and the Federal Water Quality Administration to EPA.
- In 1971 and 1972 HEW reversed its 1970 drop with important increases that were expected to

APPLIED RESEARCH

THE CURRENT PERIOD

Changes in applied research obligations in the current period are shown below:

Federal obligations for applied research, by agency

[Dollars in millions]

| Agency | Actual | | | Estimates | | | |
|--|---------|---------|------------------------|-----------|------------------------|---------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total..... | \$3,145 | \$3,540 | +12.6 | \$3,830 | +8.2 | \$4,244 | +10.8 |
| Department of Defense..... | 1,135 | 1,310 | +15.4 | 1,236 | -5.6 | 1,388 | +12.3 |
| Department of Health, Education, and Welfare..... | 803 | 741 | -7.7 | 910 | +22.8 | 1,002 | +10.1 |
| National Aeronautics and Space Administration..... | 618 | 773 | +25.1 | 852 | +10.2 | 874 | +2.6 |
| Department of Agriculture..... | 145 | 156 | +7.6 | 170 | +8.7 | 176 | +3.6 |
| Atomic Energy Commission..... | 132 | 146 | +10.6 | 145 | -0.8 | 145 | -0.2 |
| Department of Transportation..... | 51 | 67 | +31.4 | 90 | +34.4 | 161 | +78.3 |
| Department of the Interior..... | 109 | 72 | -33.9 | 84 | +16.9 | 91 | +8.8 |
| Department of Commerce..... | 29 | 55 | +89.7 | 78 | +42.8 | 86 | +9.7 |
| Environmental Protection Agency..... | | 48 | | 56 | +16.8 | 70 | +26.6 |
| Veterans Administration..... | 43 | 53 | +23.3 | 55 | +5.3 | 55 | |
| National Science Foundation..... | 11 | 30 | +172.7 | 42 | +41.4 | 70 | +67.0 |
| Office of Economic Opportunity..... | 11 | 28 | +154.5 | 37 | +32.2 | 37 | +1.0 |
| Department of State..... | 16 | 19 | +18.8 | 25 | +34.2 | 28 | +11.2 |
| Other agencies..... | 42 | 42 | | 50 | +19.0 | 61 | +22.0 |

- The 1969-72 period indicates a steady rise in total applied research obligations after an almost 5-percent decline from 1968 to 1969. Nearly all agencies were expected to contribute to this growth.

- In 1970 the important growth in applied research derives more from growth for DOD than any other agency, although the only agencies to experience significant reductions were HEW and Interior.

- The decrease for Interior was entirely due to the transfer of the Bureau of Commercial Fisheries to the National Oceanic and Atmospheric Administration (NOAA) within Commerce and the Federal Water Quality Administration to EPA.

- In 1971 and 1972 HEW reversed its 1970 drop with important increases that were expected to

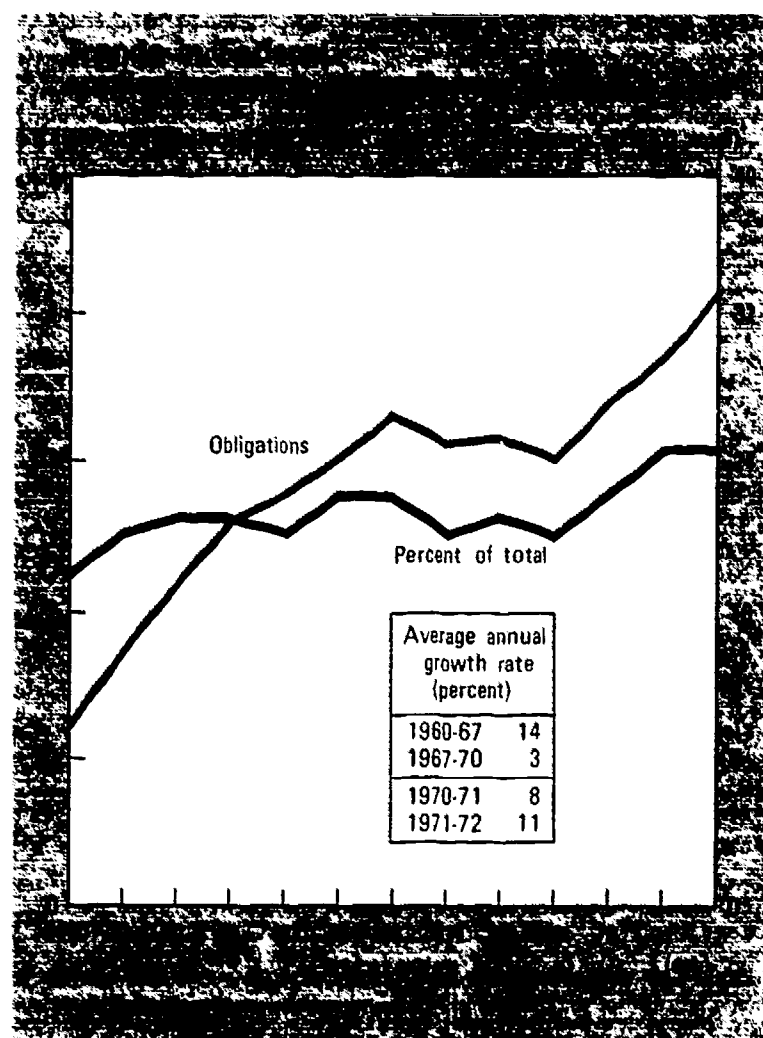
bring about the highest applied research totals on record for this agency.

- DOD experienced an overall loss in 1971, brought about by reductions in all three services and the Defense Agencies, but between 1969 and 1972 the Department showed an overall gain of 22 percent. Three-quarters of this gain represented Air Force programs.
- Within HEW the National Institutes of Health in the current period is undergoing expansion in applied research, mainly spurred by cancer investigations, heart and lung studies, child health and eye research. The Office of Education's larger applied research efforts are directed to vocational education and education for the handicapped.
- NASA in 1970 and 1971 registered important increases in applied research obligations. These include further funding for work on earth resources surveys and the space station.

- The substantial increases in the applied research efforts of DOT in 1971 and 1972 arise mostly from the transfer of development funds to applied work on the new air traffic control system and from work on aircraft safety and air quality within the Federal Aviation Administration, and from extended planning, forecasting, and systems analysis in the Transportation Systems Center within the Office of the Secretary.
- Commerce, EPA, and NSF are three other agencies whose applied research programs in the 1970-72 period contribute fairly substantially to overall growth. For Commerce most of the applied research increases are for NOAA programs; for the newly organized EPA they are largely for work on water pollution and air pollution; and for NSF they are mainly for the new Research Applied to National Needs (RANN) program and the International Decade of Ocean Exploration (IDOE) program, initiated in 1971 with NSF as the lead agency.

TRENDS

- Applied research shows a steep growth trend from 1960 to 1966, reflecting the strong buildup of DOD and NASA programs. By the end of that period Federal applied research had established a level above \$3 billion annually.
- Between 1966 and 1969 the applied research activities of the two leading agencies (DOD and NASA) declined considerably, but this loss was to a great extent offset by growth in applied research on the part of HEW, AEC, and most of the other agencies. Nonetheless, the overall total declined somewhat.
- From 1961 through 1969 applied research maintained a steady 20- to 22-percent range in its share of the Federal R&D total.



- In 1970 applied research rose, in contrast to the drop in the overall R&D curve. Chief contributors to this rise were DOD and NASA.
- For the current (1970-72) period applied research shows a powerful upward trend spurred by programs of most of the leading agencies. In 1972, for the first time, the applied research total is expected to cross the \$4 billion level.
- The 1971 and 1972 estimates indicate that, for the first time, applied research will represent as much as 25 percent of all Federal R&D obligations.

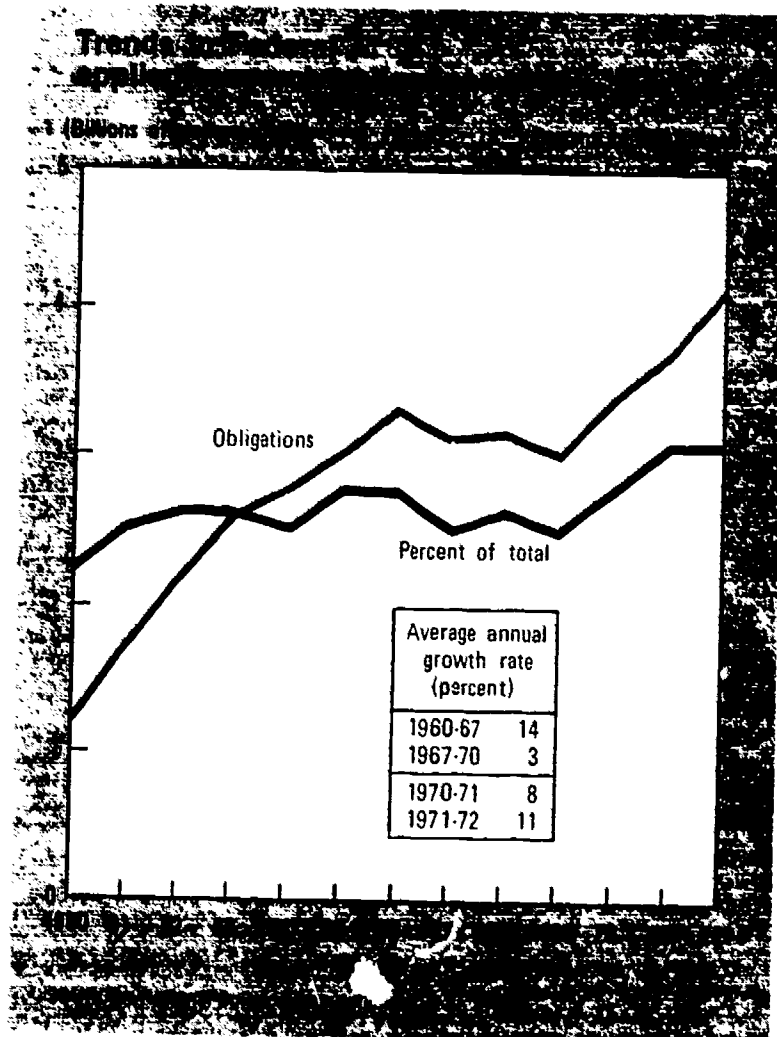
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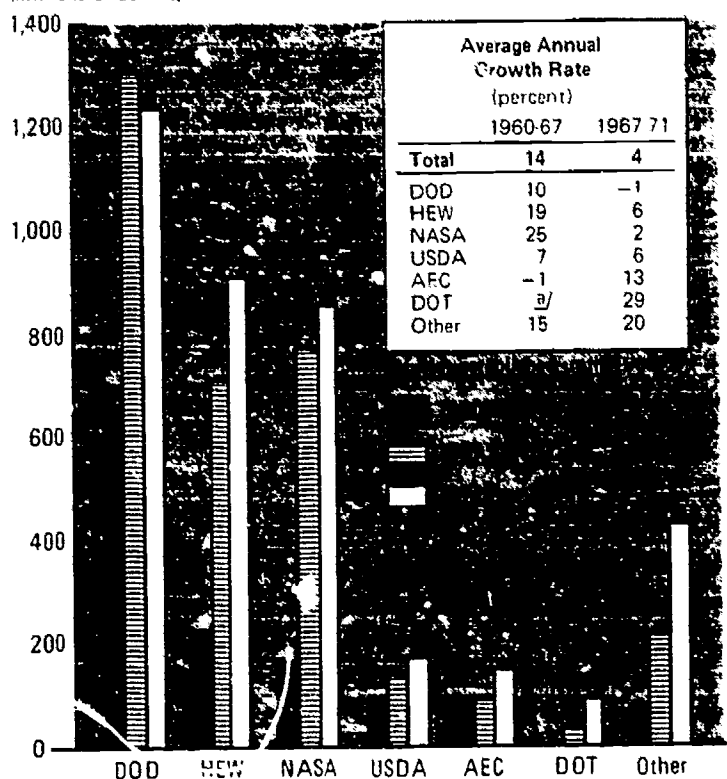
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- For the current (1970-72) period applied research shows a powerful upward trend spurred by programs of most of the leading agencies. In 1972, for the first time, the applied research total is expected to cross the \$4 billion level.
- The 1971 and 1972 estimates indicate that, for the first time, applied research will represent as much as 25 percent of all Federal R&D obligations.

AGENCIES

- Of the 33 agencies reporting in the current period, 32 conducted applied research programs. The one exception was the Smithsonian Institution.
- Three agencies—DOD, HEW, and NASA—continue to dominate the Federal applied research effort. In 1971 they accounted for 78 percent of the Federal agency total. Most of the overall dollar rise from 1960 to 1967 was caused by their rapidly growing programs. From 1967 to 1971, however, their applied research programs grew far more slowly, or declined, while higher growth rates were registered by most other agencies, especially DOT.
- Throughout the 1960-71 period DOD was the chief agency to support applied research. Hence its 10-percent average annual growth rate in the 1960-67 period strongly influenced the rise in the Federal total, and its 1-percent decline rate in the 1967-70 period had a somewhat depressing effect on the overall trend.
- HEW reflects almost sustained applied research growth in the 1960-71 timespan, although its rate of expansion from 1960 to 1967 was much more rapid than from 1967 to 1971. A drop in applied research in 1970 was more than made up in 1971.
- In the 1960-67 period NASA reflected an exceptionally high average annual growth rate and, despite the decline that set in between 1966 and 1969, showed a small average annual increase between 1967 and 1971. In 1971 and 1972 NASA's applied research efforts were scheduled to expand considerably and attain the highest levels thus far.
- In both periods USDA's growth rate was very evenly sustained. This agency has showed some gain in applied research obligations every year from 1960 to 1971.

**Federal obligations for applied research,
by agency, FY 1960, 1967, and 1971 (est.)**

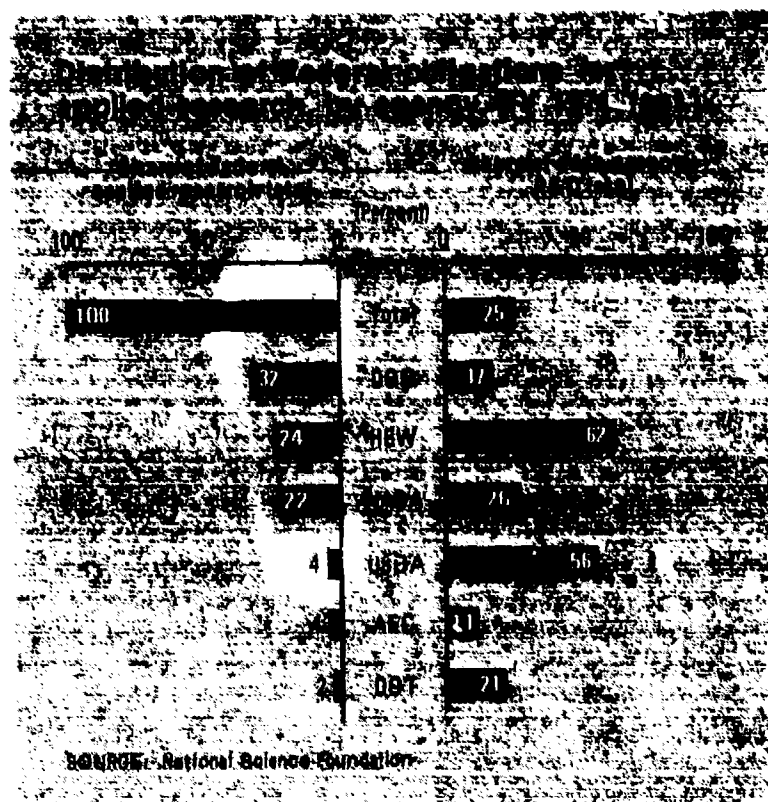
(Millions of dollars)



SOURCE: National Science Foundation

- AEC, on the other hand, experienced a slight net loss between 1960 and 1967, followed by a notable expansion in its applied research programs from 1967 to 1971.
- In the 1967-71 period, aside from DOT, for which large gains were chiefly recorded by the Federal Highway Administration, growth was also strongly evidenced by Commerce, NSF, and the Office of Economic Opportunity (OEO).

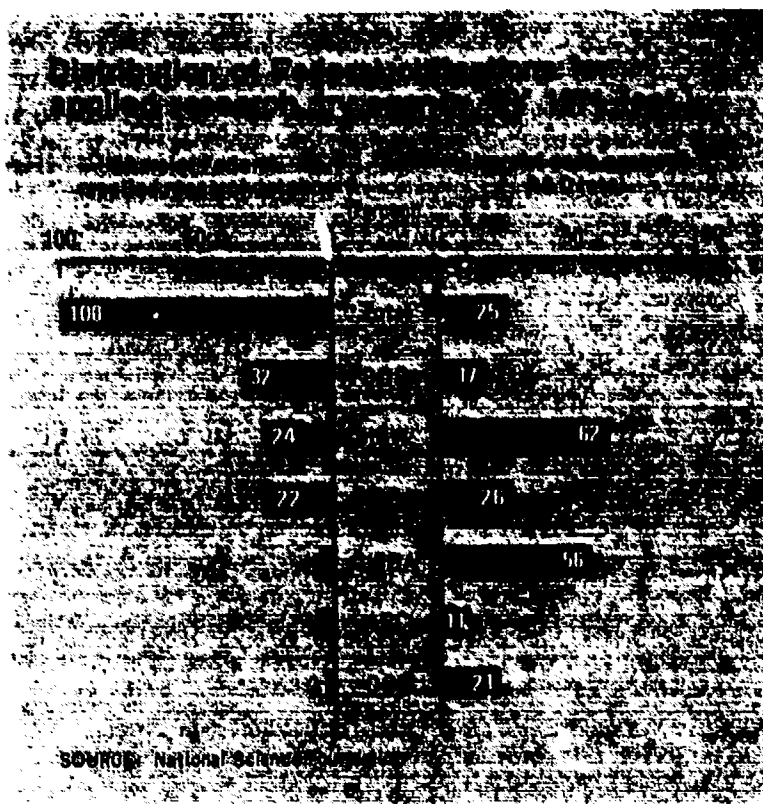
- Although applied research is part of the R&D support activities of almost every agency, the share in these activities varies widely among agencies.
- At the lower extreme AEC planned to direct only 11 percent of all R&D obligations to applied research in 1971 whereas six independent agencies and seven agency subdivisions at the other extreme planned to devote 100 percent to applied research.



SOURCE: National Science Foundation

APPLIED RESEARCH

- Although applied research is part of the R&D support activities of almost every agency, the share in these activities varies widely among agencies.
- At the lower extreme AEC planned to direct only 11 percent of all R&D obligations to applied research in 1971 whereas six independent agencies and seven agency subdivisions at the other extreme planned to devote 100 percent to applied research.



PERFORMERS

All sectors participate in applied research work for the Federal Government, and the dollar obligations directed to each in the current period are given below:

Federal obligations for applied research, by performer

(Dollars in millions)

| Performer | Actual | | | Estimates | | | |
|---|---------|---------|------------------------|-----------|------------------------|---------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total..... | \$3,145 | \$3,540 | +12.6 | \$3,830 | +8.2 | \$4,244 | +10.8 |
| Federal intramural..... | 1,195 | 1,375 | +15.1 | 1,433 | +4.2 | 1,519 | +6.0 |
| Industrial firms ^a | 848 | 1,047 | +23.5 | 1,126 | +7.5 | 1,315 | +16.9 |
| Universities and colleges..... | 643 | 633 | -1.6 | 727 | +14.8 | 826 | +13.5 |
| FFRDC's administered by universities..... | 139 | 150 | +7.9 | 145 | -3.2 | 150 | +3.2 |
| Other nonprofit institutions ^a | 226 | 250 | +10.6 | 280 | +11.9 | 305 | +8.9 |
| Other..... | 95 | 85 | -10.5 | 120 | +40.6 | 131 | +8.9 |

^a Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

- In the 1969-72 period the strong general rise in Federal applied research programs has affected all sectors. Most of them show increases from one year to the next.
- Industrial work has revealed the greatest tendency to fluctuate as a result of program changes by DOD and NASA. In 1970 funds to this performing sector rose by 24 percent after

Federal obligations for applied research, by performer and agency, FY 1971 (est.)

(Dollars in millions)

| | DOD | HEW | NASA | USDA | AEC | DOT | OTHER |
|--|-----|-----|--------------|--------------|-----|--------------|-------|
| Federal intramural | 457 | 148 | 454 | 126 | 4 | 32 | 212 |
| Industrial firms | 628 | 45 | 307 | ^a | 2 | 31 | 71 |
| FFRDC's administered by industrial firms | 3 | — | 1 | — | 38 | — | — |
| Universities and colleges | 56 | 474 | 37 | 42 | 17 | 7 | 94 |
| FFRDC's administered by universities | 32 | 3 | 38 | — | 71 | — | 1 |
| Other nonprofit institutions | 32 | 156 | 11 | 1 | 3 | 5 | 29 |
| FFRDC's administered by other nonprofit institutions | 27 | 3 | ^a | — | 10 | ^a | 3 |
| Other | 2 | 82 | 1 | 2 | 1 | 14 | 18 |

^a/ Less than \$500,000.

research work for the Federal Government, and the dollar obligations period are given below:

Dollar obligations for applied research, by performer

[Dollars in millions]

| | Actual | | | Estimates | | | |
|--|---------|---------|------------------------|-----------|------------------------|---------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| | \$3,145 | \$3,540 | +12.6 | \$3,830 | +8.2 | \$4,244 | +10.8 |
| | 1,195 | 1,375 | +15.1 | 1,433 | +4.2 | 1,519 | +6.0 |
| | 848 | 1,047 | +23.5 | 1,126 | +7.5 | 1,315 | +16.9 |
| | 643 | 633 | -1.6 | 727 | +14.8 | 826 | +13.5 |
| | 139 | 150 | +7.9 | 145 | -3.2 | 150 | +3.2 |
| | 226 | 250 | +10.6 | 280 | +11.9 | 305 | +8.9 |
| | 95 | 85 | -10.5 | 120 | +40.5 | 131 | +8.9 |

FFRDC's administered by this sector.

ing general rise
grams has af-
show increases

- Industrial work has revealed the greatest tendency to fluctuate as a result of program changes by DOD and NASA. In 1970 funds to this performing sector rose by 24 percent after

Applied research, by performer and agency, FY 1971 (est.)

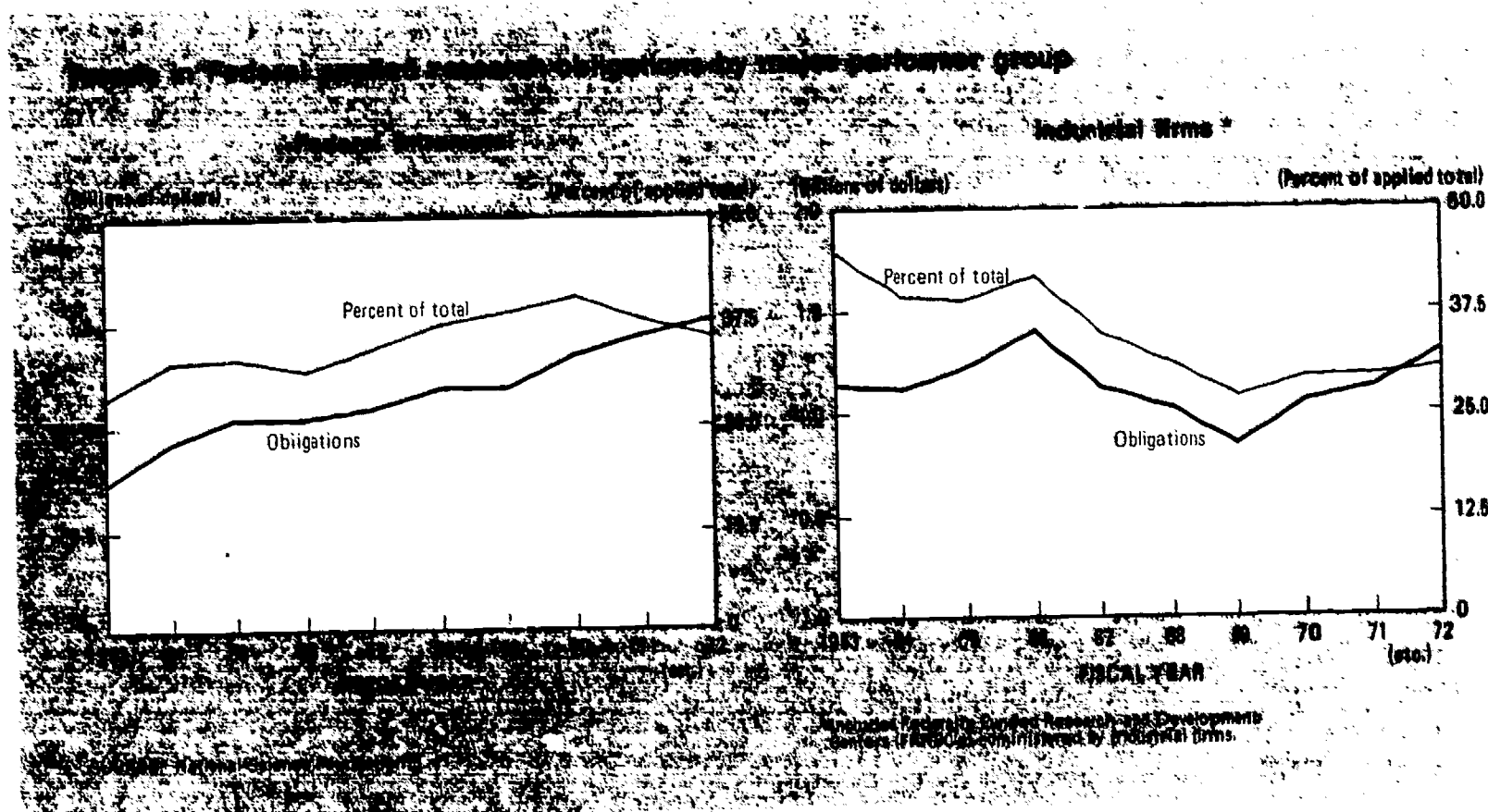
[Dollars in millions]

| | DOD | HEW | NASA | USDA | AEC | DOT | OTHER |
|---------|--------|--------|--------|-------|-------|-------|-------|
| TOTAL | 34,238 | 12,110 | 10,021 | 2,200 | 2,200 | 2,200 | 2,200 |
| HEW | 457 | 148 | 454 | 126 | 4 | 32 | 212 |
| NASA | 628 | 45 | 307 | a | 2 | 31 | 71 |
| USDA | 3 | - | 1 | - | 38 | - | - |
| AEC | 56 | 474 | 37 | 42 | 17 | 7 | 94 |
| DOT | 32 | 3 | 38 | - | 71 | - | 1 |
| OTHER | 32 | 156 | 11 | 1 | 3 | 5 | 29 |
| FFRDC's | 27 | 3 | a | - | 10 | a | 3 |
| FFRDC's | 2 | 82 | 1 | 2 | 1 | 14 | 18 |

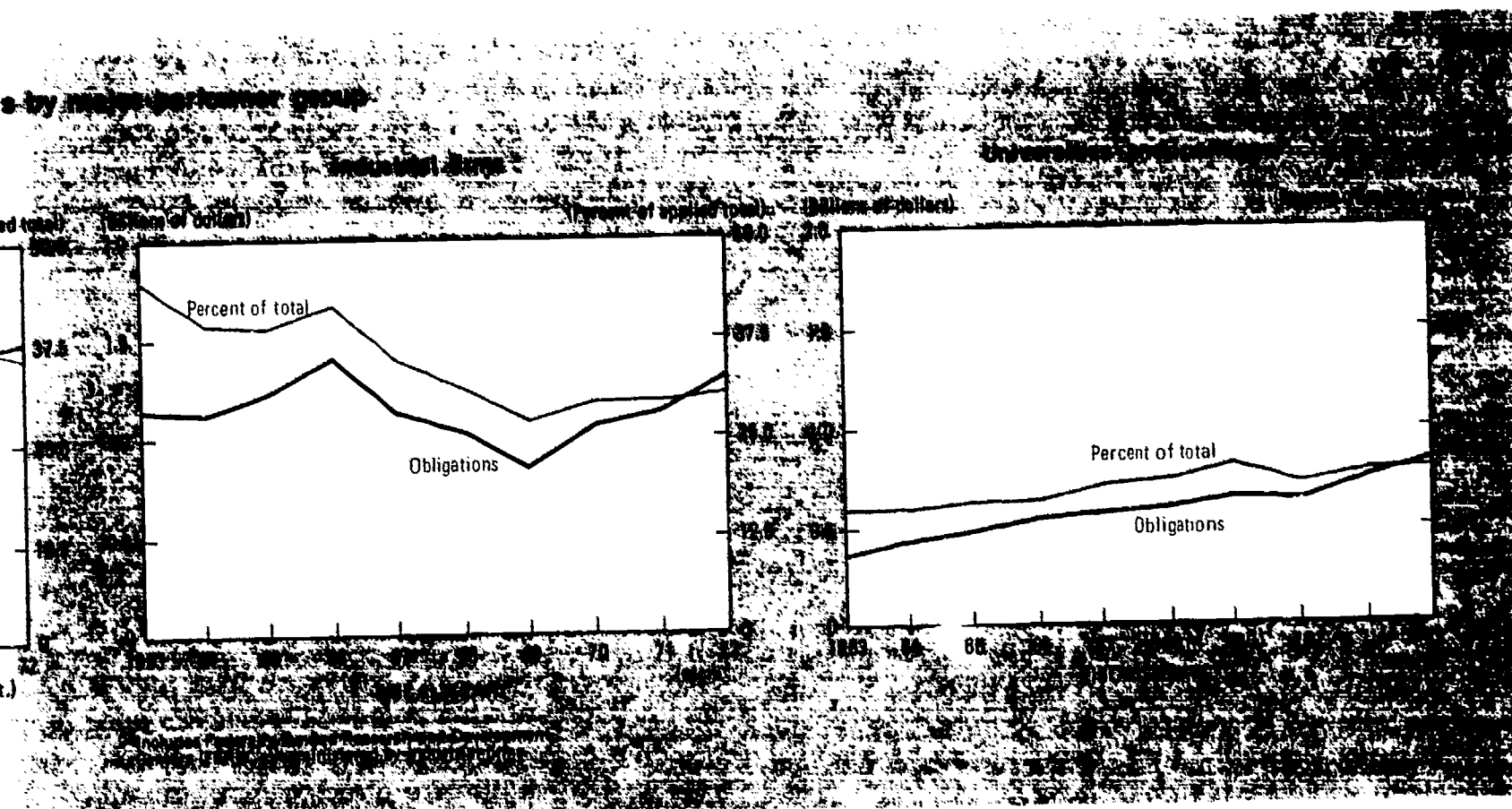
a decline of several years. A further rise is expected to continue through 1972.

- However, in the current period the chief performing sector for overall Federal applied work still continues to be the Federal one, and moderate increases are expected each year.
- Universities and colleges, the third largest area of performance for Federal applied research, declined slightly in 1970 from 1969, but then resumed the rise recorded since 1963. In the current period they are mostly funded by HEW, next by DOD, USDA, NASA, and NSF.

- All major applied research support agencies except AEC direct an important portion of their work to their own laboratories and facilities (HEW less than the rest).
- For DOD the most prominently used sector is industry, even though this agency also uses its own personnel for a substantial portion of its applied research work.
- HEW directs most of its applied research funds to universities and colleges, the next largest amount (in 1971) to other nonprofit institutions, and the third largest amount to its own facilities.
- NASA, USDA, and DOT are three leading support agencies that use their own personnel and facilities for applied research more than any other performing group. NASA and DOT also use industry importantly, and USDA places a sizable share of its work in universities and colleges.
- AEC uses FFRDC's administered by each sector far more than it uses the sectors proper. AEC is unique in that almost none of its work is carried out directly in its own facilities by its own personnel.



- By 1967 Federal intramural performance of applied research had risen to a point almost equal to industrial performance (including FFRDC's). Thereafter, the intramural effort continued to increase and so did its share of the applied research total. As the leading sector in 1971, its share was 37 percent of the total.
- From 1966 to 1969 obligations to industrial firms dropped yearly, but then started a rising trend. In 1971 dollar obligations to industry amounted to 29 percent of the total, compared with 27 percent in 1969, and 45 percent in 1963.



- From 1966 to 1969 obligations to industrial firms dropped yearly, but then started a rising trend. In 1971 dollar obligations to industry amounted to 29 percent of the total, compared with 27 percent in 1969, and 45 percent in 1963.

- From 1963 to 1972 funds for applied research activities at universities and colleges rose consistently. The great bulk of this support came from HEW and was large enough to offset decreases in DOD support after 1966. The university and college sector increased its share of the applied research total from 14 percent to 19 percent in this period.

FIELDS

The distribution of applied research obligations to major fields of science in the current period is as follows:

**Federal obligations for applied research,
by field of science**
(Dollars in millions)

| Field of science | Actual | | Estimates | | | |
|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1970 | | 1971 | | 1972 | |
| | Ob- liga- tions | Per- cent share | Ob- liga- tions | Per- cent share | Ob- liga- tions | Per- cent share |
| Total..... | \$3,540 | 100 | \$3,830 | 100 | \$4,244 | 100 |
| Life sciences..... | 957 | 27 | 1,104 | 29 | 1,210 | 29 |
| Psychology..... | 56 | 2 | 65 | 2 | 74 | 2 |
| Physical sciences..... | 306 | 9 | 300 | 8 | 356 | 8 |
| Astronomy..... | 7 | (*) | 8 | (*) | 10 | (*) |
| Chemistry..... | 101 | 3 | 102 | 3 | 117 | 3 |
| Physics..... | 185 | 5 | 178 | 5 | 216 | 5 |
| Other..... | 13 | (*) | 12 | (*) | 13 | (*) |
| Environmental sciences..... | 234 | 7 | 271 | 7 | 283 | 7 |
| Atmospheric sciences..... | 115 | 3 | 138 | 4 | 143 | 3 |
| Geological sciences..... | 65 | 2 | 71 | 2 | 75 | 2 |
| Oceanography..... | 37 | 1 | 36 | 1 | 37 | 1 |
| Other..... | 18 | 1 | 25 | 1 | 28 | 1 |
| Mathematics..... | 43 | 1 | 51 | 1 | 54 | 1 |
| Engineering..... | 1,725 | 49 | 1,774 | 46 | 1,950 | 46 |
| Social sciences..... | 150 | 4 | 192 | 5 | 211 | 5 |
| Other sciences..... | 68 | 2 | 74 | 2 | 107 | 3 |

* Less than 0.5 percent.

- Between 1960 and 1972 Federal obligations for applied research will have risen more than three times, and some changes have taken place in the relationships between major fields.

- The engineering sciences continue to be the largest area in terms of dollars and in terms of share; the share was 46 percent of the total both in 1960 and 1971. DOD and NASA have contributed most to applied research in this field.
- The life sciences more than tripled in funding between 1960 and 1971 and increased their share from 26 percent to 29 percent. The largest investments in this area are made by HEW, followed by USDA and DOD.
- The physical sciences and the environmental sciences combined represented 23 percent of the applied research total in 1960 and 15 percent in 1971. As is the case with basic research, the physical sciences receive more funding than the environmental sciences, and both show major support from DOD and NASA. However, DOD funds are directed more toward the physical sciences and NASA funds more toward the environmental sciences. The physical sciences have additional support from AEC, USDA, and HEW.
- The social sciences reflected the largest relative increase from 1960 to 1971, and their share of the applied research total moved from 2 percent to 5 percent. They receive support chiefly from HEW, USDA, and OEO.
- Psychology and mathematics represented 2 percent and 1 percent, respectively, of the applied research total in 1971.

(For detailed data on this section see appendix tables C-48 through C-66, C-90, C-101, C-106, and C-110.)

SECTION 4. development

In development the findings and understanding derived from research are directed toward the production of useful materials, devices, systems, and methods; included in such work are the design and improvement of prototypes and new processes. Development activities usually involve engineering and testing to advance a component, product, or process to the point where it meets specific functional or economic requirements. Because development moves toward defined ends, it can be more readily associated with distinct national goals than most research.

THE CURRENT PERIOD

The agencies currently most heavily engaged in the are shown as follows:

Federal obligations for development
(Dollars in millions)

| Agency | 1969 |
|--|----------|
| Total..... | \$10,398 |
| Department of Defense..... | 6,284 |
| National Aeronautics and Space Administration..... | 2,667 |
| Atomic Energy Commission..... | 989 |
| Department of Transportation..... | 160 |
| Department of Health, Education, and Welfare..... | 121 |
| Other agencies..... | 177 |

- The estimated increase in development obligations for 1972 marks the first rise for development in 5 years. However, a net decline of 4 percent is still registered for the overall 1969-72 period, chiefly the result of NASA's phasing out of the Apollo program.
- In the current period DOD has scheduled the largest dollar increases of any agency, mostly for development of aircraft and ships, while AEC's reductions primarily result from diminished underground testing, and a decline in the NERVA engine development program.

DEVELOPMENT

THE CURRENT PERIOD

The agencies currently most heavily engaged in the sponsorship of Federal development programs are shown as follows:

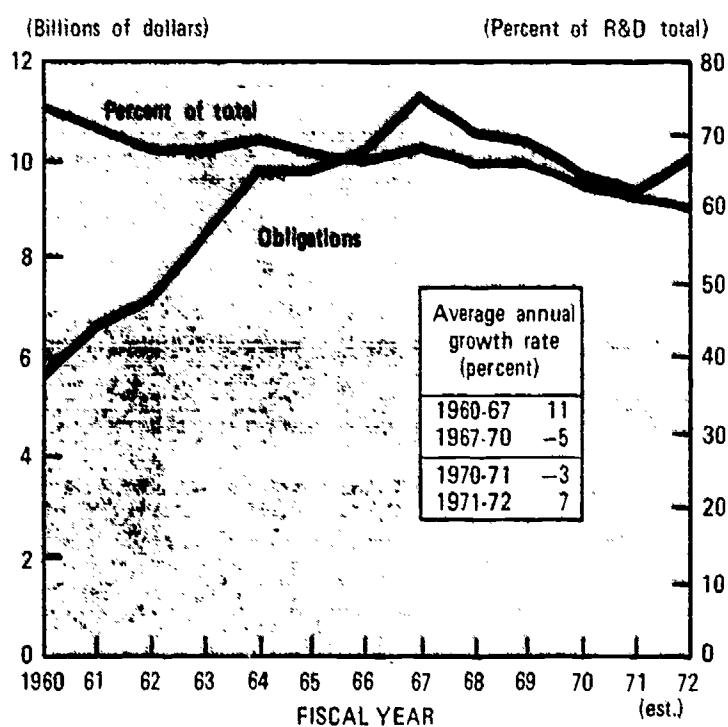
Federal obligations for development, by agency

[Dollars in millions]

| Agency | Actual | | | Estimates | | | |
|--|----------|---------|------------------------|-----------|------------------------|----------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total..... | \$10,398 | \$9,728 | -6.4 | \$9,392 | -3.5 | \$10,018 | +6.7 |
| Department of Defense..... | 6,284 | 5,804 | -7.6 | 5,941 | +2.4 | 6,698 | +12.8 |
| National Aeronautics and Space Administration..... | 2,667 | 2,390 | -10.4 | 1,770 | -25.9 | 1,627 | -8.1 |
| Atomic Energy Commission..... | 989 | 913 | -7.7 | 883 | -3.3 | 840 | -4.9 |
| Department of Transportation..... | 160 | 229 | +43.1 | 326 | +42.3 | 299 | -8.2 |
| Department of Health, Education, and Welfare..... | 123 | 92 | -25.2 | 118 | +28.4 | 146 | +23.7 |
| Other agencies..... | 175 | 300 | +71.4 | 354 | +17.9 | 408 | +15.1 |

- The estimated increase in development obligations for 1972 marks the first rise for development in 5 years. However, a net decline of 4 percent is still registered for the overall 1969-72 period, chiefly the result of NASA's phasing out of the Apollo program.
- In the current period DOD has scheduled the largest dollar increases of any agency, mostly for development of aircraft and ships, while AEC's reductions primarily result from diminished underground testing, and a decline in the NERVA engine development program.
- The great bulk of DOT obligations represents support for the civil supersonic transport (SST) aircraft. The data on DOT, of course, do not reflect congressional action on SST development funds for the last 3 months of 1971, or any action on the 1972 budget.
- Within HEW more than one-half of the development effort is concentrated in the Office of Education.

Trends in Federal development obligations



SOURCE: National Science Foundation

TRENDS

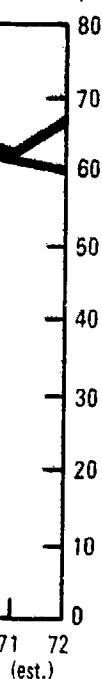
- Although development represented the largest dollar share of the R&D total, its rise from 1960 to 1967 was not as rapid as the rise for research. Its share of the R&D total during this period declined from 74 percent to 68 percent.
- From 1967 to 1971 development funding fell steadily, moving below the 1964 level. The development share of the R&D total fell to 61 percent in this period. This loss was influenced more by NASA cutbacks than by any other factor, although in some years DOD reductions played an important part.
- The anticipated upturn in 1972 reaches the 1966 level once again, largely the result of DOD plans. Despite this substantial dollar increase, the development share of the R&D total is expected to be only 60 percent in 1972 because of the greater growth of research.

AGENCIES

- DOD has been the leading supporter of development by a wide margin throughout the 1960-72 period. DOD's share dropped from 86 percent of the Federal total in 1960 to 51 percent in 1966 but is expected to rise to an estimated 67 percent in 1972.
- While DOD's share of the total was declining in the early 1960's, NASA's share was rapidly increasing, from 2 percent in 1960 to a high of 38 percent in 1965. Since then the situation has reversed itself, with the space agency's share dropping to an estimated 16 percent in 1972 and DOD's share rising from its 1966 low to a consistently higher level.
- Until 1963 AEC was second in development obligations. That year it moved to third place after NASA, despite growing R&D programs. Its share of the Federal development total has gradually decreased, from 10 percent in 1960 to an estimated 8 percent in 1972.
- Development growth rates for the other agencies in recent years have been higher than for the DOD-NASA-AEC group. These "other" agencies reflect a share increase from less than 2 percent in 1960 to 9 percent in 1972. The chief contributor to dollar growth within this group has been DOT—largely for work on the SST aircraft. Next has been HEW—largely for programs in education. Together these two agencies are expected to account for 5 percent of the Federal development total in 1972.
- Among the remaining agencies, whose combined programs are expected to be 4 percent of the Federal development total in 1972, chief growth is planned by the Postal Service, EPA, and Interior.

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R&D total)

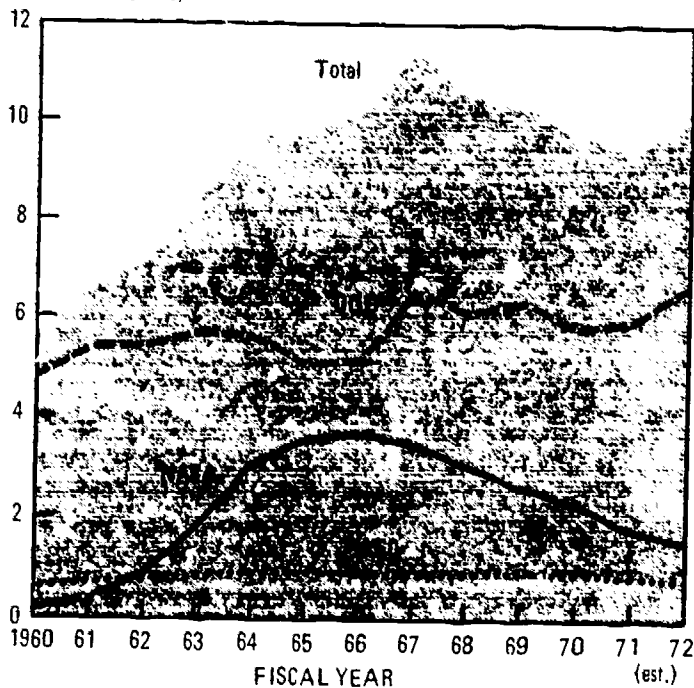


AGENCIES

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- Development growth rates for the other agencies in recent years have been higher than for the DOD–NASA–AEC group. These "other" agencies reflect a share increase from less than 2 percent in 1960 to 9 percent in 1972. The chief contributor to dollar growth within this group has been DOT—largely for work on the SST aircraft. Next has been HEW—largely for programs in education. Together these two agencies are expected to account for 5 percent of the Federal development total in 1972.
- Among the remaining agencies, whose combined programs are expected to be 4 percent of the Federal development total in 1972, chief growth is planned by the Postal Service, EPA, and Interior.

Trends in Federal obligations for development by selected agencies

(Billions of dollars)

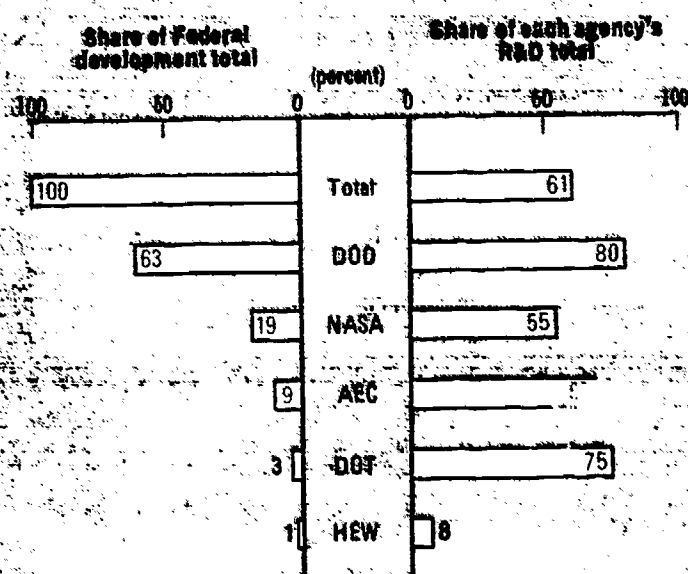


SOURCE: National Science Foundation

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Distribution of Federal obligations for development, by agency, FY 1971 (est.)



SOURCE: National Science Foundation

- For many agencies the development share in R&D budgets is large because of the high cost of the prototypes, components, expendable materials, and systems design involved in their programs. Such agencies include DOD, NASA, AEC, and DOT, as well as the Postal Service.
- In contrast to the more development-oriented agencies, HEW was expected to direct only 8 percent of its total R&D obligations to development in 1971, most of them within the Office of Education.
- Some development consists of work on new methods, communications techniques, and conceptual tools rather than complex machinery. Examples include new educational curriculums, technical assistance methods, better indices for measuring economic variables, new means of crime detection, or improved job aptitude tests. Even this kind of development may represent a large share of an agency's R&D budget, as in the case of OEO (66 percent in 1971).

PERFORMERS

The performance of Federal development work is characterized by the following table shows:

Federal obligations for development
(Dollars in million)

| Performer | 1969 |
|---|----------|
| Total..... | \$10,398 |
| Federal intramural..... | 1,726 |
| Industrial firms *..... | 7,878 |
| Universities and colleges..... | 127 |
| FFRDC's administered by universities..... | 328 |
| Other nonprofit institutions *..... | 310 |
| Other..... | 28 |

* Includes Federally Funded Research and Development Centers (FFRDC's) administered by this agency.

- Industrial firms received a decreasing amount in Federal development obligations from 1969 to 1971, continuing the decline that started in 1968. The 8-percent rise for industry in 1972 reverses the trend, but funds for this sector are still well below levels of former years.
- Development programs of DOD and NASA have been primarily responsible for the broad trend of funding to industry.

DEVELOPMENT

PERFORMERS

The performance of Federal development work is characterized by the predominance of the industrial sector, as the following table shows:

Federal obligations for development, by performer
[Dollars in millions]

| Performer | Actual | | | Estimates | | | |
|--------------------------------------|----------|---------|------------------------|-----------|------------------------|----------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total | \$10,398 | \$9,728 | -6.4 | \$9,392 | -3.5 | \$10,018 | +6.7 |
| Federal intramural | 1,726 | 1,843 | +6.8 | 1,827 | -.9 | 1,916 | +4.9 |
| Industrial firms* | 7,878 | 7,014 | -11.0 | 6,720 | -4.2 | 7,252 | +7.9 |
| Universities and colleges | 127 | 121 | -4.7 | 146 | +20.2 | 158 | +8.0 |
| FFRDC's administered by universities | 328 | 332 | +0.9 | 334 | +.5 | 342 | +2.4 |
| Other nonprofit institutions* | 310 | 398 | +28.4 | 331 | -16.9 | 314 | -5.1 |
| Other | 28 | 19 | -32.1 | 35 | +84.3 | 36 | +2.4 |

* Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

- Industrial firms received a decreasing amount in Federal development obligations from 1969 to 1971, continuing the decline that started in 1968. The 8-percent rise for industry in 1972 reverses the trend, but funds for this sector are still well below levels of former years.
- Development programs of DOD and NASA have been primarily responsible for the broad trend of funding to industry.
- By contrast, development work assigned to Federal intramural laboratories and test facilities in each year of the 1970-72 period reaches a higher total than for any year previous to the current 3-year timespan. DOD has by far the most influence of any agency on trends in intramural development funding.
- Considerably more development is done by university-administered FFRDC's than by universities and colleges proper.

Federal obligations for development, by performer and agency, FY 1971 (est.)

[Dollars in millions]

| | TOTAL | DOD | NASA | AEC | DOT | HEW | OTHER |
|--|----------------|----------------|----------------|--------------|--------------|--------------|--------------|
| TOTAL | \$9,222 | \$5,941 | \$1,770 | \$883 | \$326 | \$118 | \$384 |
| Federal intramural | 1,827 | 1,425 | 255 | 11 | 38 | 12 | 85 |
| Industrial firms | 6,313 | 4,176 | 1,445 | 269 | 277 | 10 | 136 |
| FFRDC's administered by industrial firms | 407 | 6 | 1 | 398 | — | — | 2 |
| Universities and colleges | 1,428 | 28 | 36 | 4 | 1 | 46 | 31 |
| FFRDC's administered by universities | 334 | 113 | 27 | 191 | — | 2 | 1 |
| Other nonprofit institutions | 188 | 51 | 5 | 3 | 2 | 18 | 89 |
| FFRDC's administered by other nonprofit institutions | 162 | 126 | a | 7 | 4 | 24 | a |
| Other | 28 | 15 | a | a | 4 | 5 | 11 |

a/ Less than \$500,000.

- In 1971 eight out of 10 development dollars directed to industrial firms represented obligations of DOD and NASA. However, virtually all the funds directed to industrially administered FFRDC's came from AEC.
- Three out of four dollars (78 percent of the total) to intramural performance were so directed by DOD. Another 14 percent of all the federally accomplished development work was done by NASA.
- Although universities and colleges still reflect a relatively small share of the development total, their development work is tending to grow.
- University-administered FFRDC's receive practically all of their funding support from AEC and DOD.
- Other nonprofit institutions and FFRDC's administered by them are both more important than universities and colleges proper in development performance.
- The pattern of performance of Federal development has been relatively consistent since 1963 when performer data were first collected. In the current (1970-72) period the share for industry has stabilized at 72 percent, the result of a gradual downward shift from the years just previous. The shift was caused by a substantial decrease in work assigned by DOD and NASA.
- The share performed by Federal personnel has increased from 15 percent in 1963 to 19 percent for each year of the current period, representing a moderate gain for the Federal intramural sector.

(For detailed data on this section see appendix tables C-67 through C-69, C-81, C-91, C-102, and C-107.)

development, by performer and agency, FY 1971 (est.)

[Dollars in millions]

| TOTAL | DOD | NASA | AEC | DOT | HEW | OTHER |
|-------|---------|---------|-------|-------|-------|-------|
| 392 | \$5,941 | \$1,770 | \$883 | \$326 | \$118 | \$384 |
| 327 | 1,425 | 255 | 11 | 38 | 12 | 85 |
| 313 | 4,176 | 1,445 | 269 | 277 | 10 | 136 |
| 407 | 6 | 1 | 398 | — | — | 2 |
| 146 | 28 | 36 | 4 | 1 | 46 | 31 |
| 334 | 113 | 27 | 191 | — | 2 | 1 |
| 168 | 51 | 5 | 3 | 2 | 13 | 89 |
| 162 | 126 | a | 7 | 4 | 24 | a |
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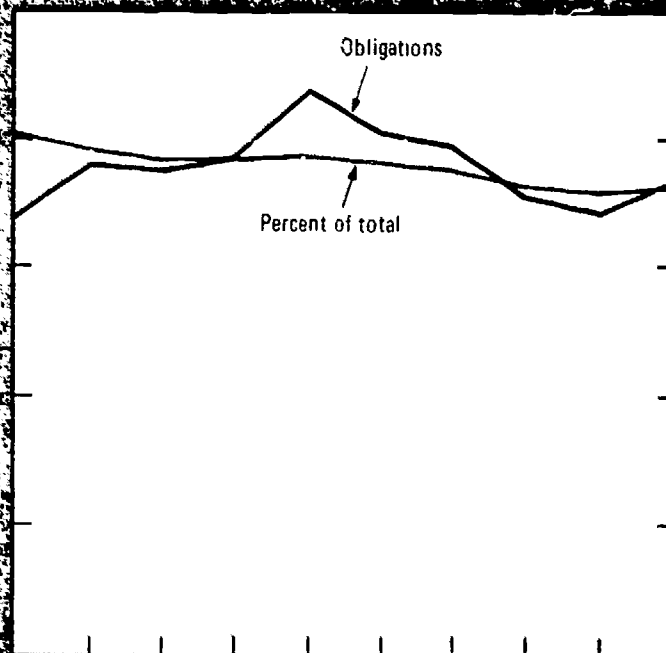
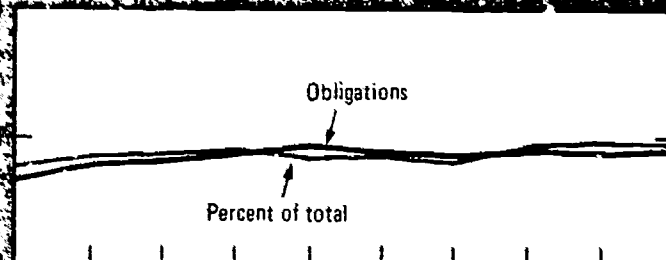
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- The share performed by Federal personnel has increased from 15 percent in 1963 to 19 percent for each year of the current period, representing a moderate gain for the Federal intramural sector.

(For detailed data on this section see appendix tables C-67 through C-69, C-81, C-91, C-102, and C-107.)



SECTION 5. performers

Many organizations reach beyond their own performing capabilities to meet their R&D objectives. Federal agencies offer the prime example of this method of operation. In 1971 the Federal Government provided funding support for 53 percent of the research and development performed throughout the economy. However, only 13 percent of the national total was accomplished by Government agencies directly.

Certain sectors, notably universities and colleges and other nonprofit institutions, receive most of the funding for their R&D work from sectors outside their own, chiefly from the Federal sector. Even industry, although currently generating about three-fifths of its own R&D support, depends on Federal backing for the rest. Thus, agency decisions on the disposition of R&D workloads have an important effect on the trend of science.

THE CURRENT PERIOD

The 1969-72 period is uneven in that some sectors in 1972 all sectors are expected to show gains.

Federal obligations for research and development

(Dollars in millions)

| Performer | 1969 | 1970 | 1971 | 1972 |
|---|--------|--------|--------|--------|
| Total..... | \$15.0 | \$14.5 | \$15.5 | \$16.0 |
| Federal intramural..... | 3.0 | 3.0 | 3.0 | 3.0 |
| Industrial firms..... | 8.0 | 7.5 | 7.5 | 7.5 |
| FFRDC's administered by industrial firms..... | 1.0 | 1.0 | 1.0 | 1.0 |
| Universities and colleges..... | 1.0 | 1.0 | 1.0 | 1.0 |
| FFRDC's administered by universities..... | 0.5 | 0.5 | 0.5 | 0.5 |
| Other nonprofit institutions..... | 0.5 | 0.5 | 0.5 | 0.5 |
| FFRDC's administered by other nonprofit institutions..... | 0.5 | 0.5 | 0.5 | 0.5 |
| Other domestic performers..... | 0.5 | 0.5 | 0.5 | 0.5 |
| Foreign performers..... | 0.5 | 0.5 | 0.5 | 0.5 |

* Less than 0.5 percent.

- Between 1969 and 1970 most of the decrease in the Federal R&D total reflected the large dollar drop in obligations to industry and the much smaller drop in obligations to universities and colleges.
- Decreases in 1970 mostly stemmed from declining support to industrial firms on the part of DOD—almost entirely Air Force—and NASA.
- However, the 1970 increase for the Federal intramural sector was the greatest dollar increase for this sector in the current period. The 1970 rise was brought about by higher funding on the part of most agencies, especially DOD and NASA, the chief supporters of intramural research and development.
- In 1971 the slight increase in the overall Federal total derived from the fact that most performers received more support, among them universities and colleges, the third most active

PERFORMERS

THE CURRENT PERIOD

The 1969-72 period is uneven in that some sectors declined in given years while others rose. But in 1972 all sectors are expected to show gains.

Federal obligations for research and development, by type of performer

(Dollars in millions)

| Performer | Actual | | | Estimates | | | |
|---|----------|----------|------------------------|-----------|------------------------|----------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total..... | \$15,637 | \$15,330 | -2.0 | \$15,387 | (*) | \$16,662 | +8.3 |
| Federal intramural..... | 3,498 | 3,876 | +10.8 | 3,929 | +1.4 | 4,139 | +5.4 |
| Industrial firms..... | 8,698 | 7,951 | -8.6 | 7,718 | -2.9 | 8,504 | +10.2 |
| FFRDC's administered by industrial firms..... | 427 | 431 | +1.0 | 479 | +11.1 | 498 | +4.0 |
| Universities and colleges..... | 1,536 | 1,473 | -4.1 | 1,617 | +9.8 | 1,826 | +13.0 |
| FFRDC's administered by universities..... | 722 | 750 | +3.9 | 762 | +1.7 | 778 | +2.1 |
| Other nonprofit institutions..... | 367 | 462 | +25.9 | 471 | +1.8 | 484 | +2.8 |
| FFRDC's administered by other nonprofit institutions..... | 242 | 249 | +2.9 | 208 | -16.4 | 211 | +1.2 |
| Other domestic performers..... | 96 | 99 | +3.1 | 136 | +38.0 | 145 | +6.8 |
| Foreign performers..... | 51 | 40 | -21.6 | 68 | +68.4 | 76 | +12.4 |

* Less than 0.5 percent.

- Between 1969 and 1970 most of the decrease in the Federal R&D total reflected the large dollar drop in obligations to industry and the much smaller drop in obligations to universities and colleges.
- Decreases in 1970 mostly stemmed from declining support to industrial firms on the part of DOD—almost entirely Air Force—and NASA.
- However, the 1970 increase for the Federal intramural sector was the greatest dollar increase for this sector in the current period. The 1970 rise was brought about by higher funding on the part of most agencies, especially DOD and NASA, the chief supporters of intramural research and development.
- In 1971 the slight increase in the overall Federal total derived from the fact that most performers received more support, among them universities and colleges, the third most active

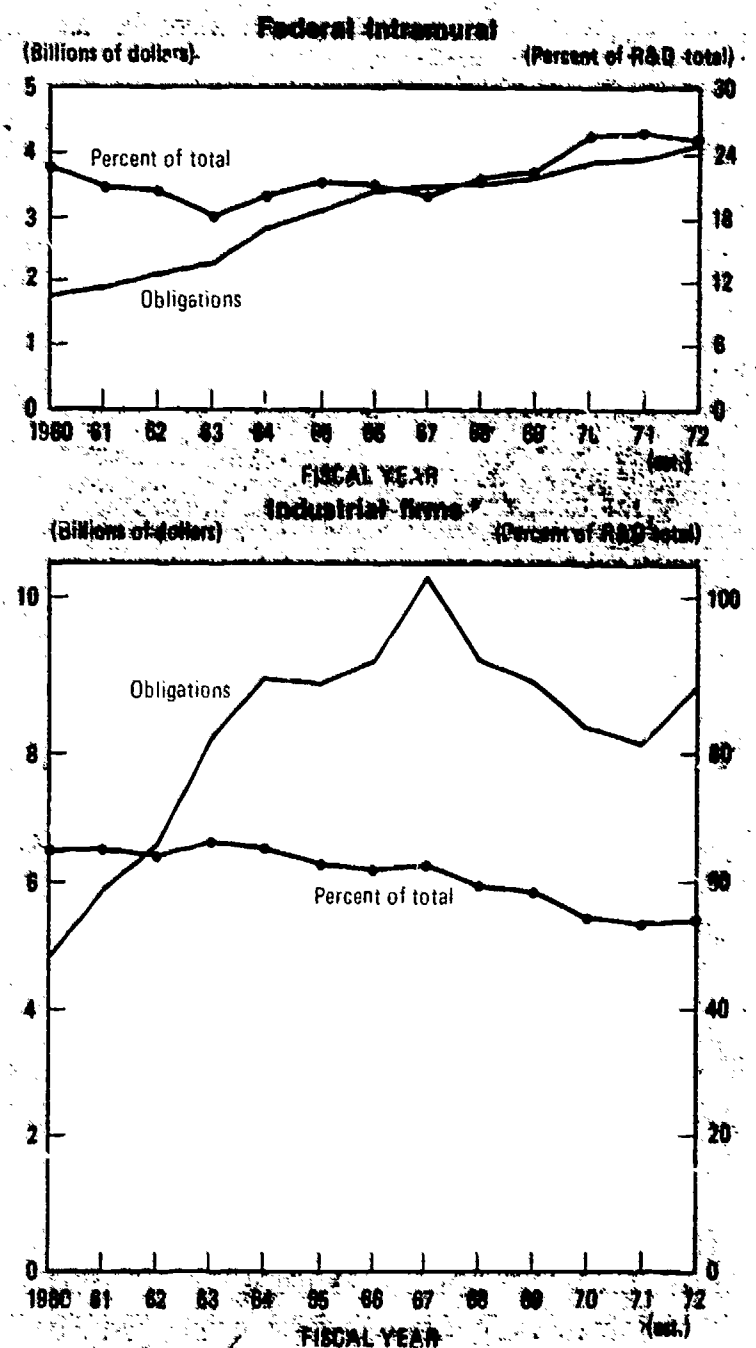
sector. At the same time the decrease for industry, the most heavily supported sector, is slight.

- The 1971 rise for universities and colleges resulted almost entirely from greatly increased support on the part of HEW and NSF, offsetting a decline in support on the part of DOD.
- In 1972 all sectors reflect plans for increased support. Obligations to industrial firms are scheduled to rise far more than they declined in 1971, moving fairly close to the 1969 level, especially when industry-administered FFRDC's are included. The dollar gain for Federal intramural work was about equal to the gain in university and college support.
- In 1970, 1971, and 1972 the Federal intramural sector was scheduled to perform more R&D work in each year than in any year previous; 1972 obligations to universities and colleges are expected to be greater than in any previous year.

TRENDS

- Federal intramural R&D work has risen almost steadily year after year. Between 1960 and 1968 dollar obligations doubled; in 1969 there was scarcely any change. Between 1969 and 1972 obligations are expected to rise by 18 percent.
- The great expansion between 1969 and 1970 was caused by NASA and DOD, agencies that jointly account for approximately three-fourths of all Federal intramural performance. Between 1970 and 1972 growth is expected to be engendered by the combined plans of most of the agencies, strongly counteracting a drop on the part of NASA.
- Besides the extensive laboratories and test facilities of DOD and NASA, those of HEW—especially the National Institutes of Health—are among the more notable Federal R&D installations. USDA and Commerce are other agencies with important R&D facilities of their own. These two agencies rely on intramural resources more fully than on any extramural sector, as do many other agencies.
- In the current (1970–72) period Federal intramural work represents 25 percent or 26 percent of all Federal research and development, a higher level than prevailed in the 1960's.
- Industrial R&D performance is more uneven than that for any other sector. After steady growth between 1960 and 1964, industrial work leveled for 2 years, rose to a peak in 1967, and then declined continuously until 1971. However, in 1972 the 10-percent anticipated rise, with FFRDC's included, is substantial.
- These extensive changes in the federally supported industrial R&D total are principally the net effect of program changes on the part of DOD and NASA. These two agencies account for approximately 90 percent of Federal fund-

Federal R&D obligations by performer group in dollars and in share of R&D total



* Includes Federally Funded Research and Development Centers (FFRDC's) administered by industrial firms.

SOURCE: National Science Foundation

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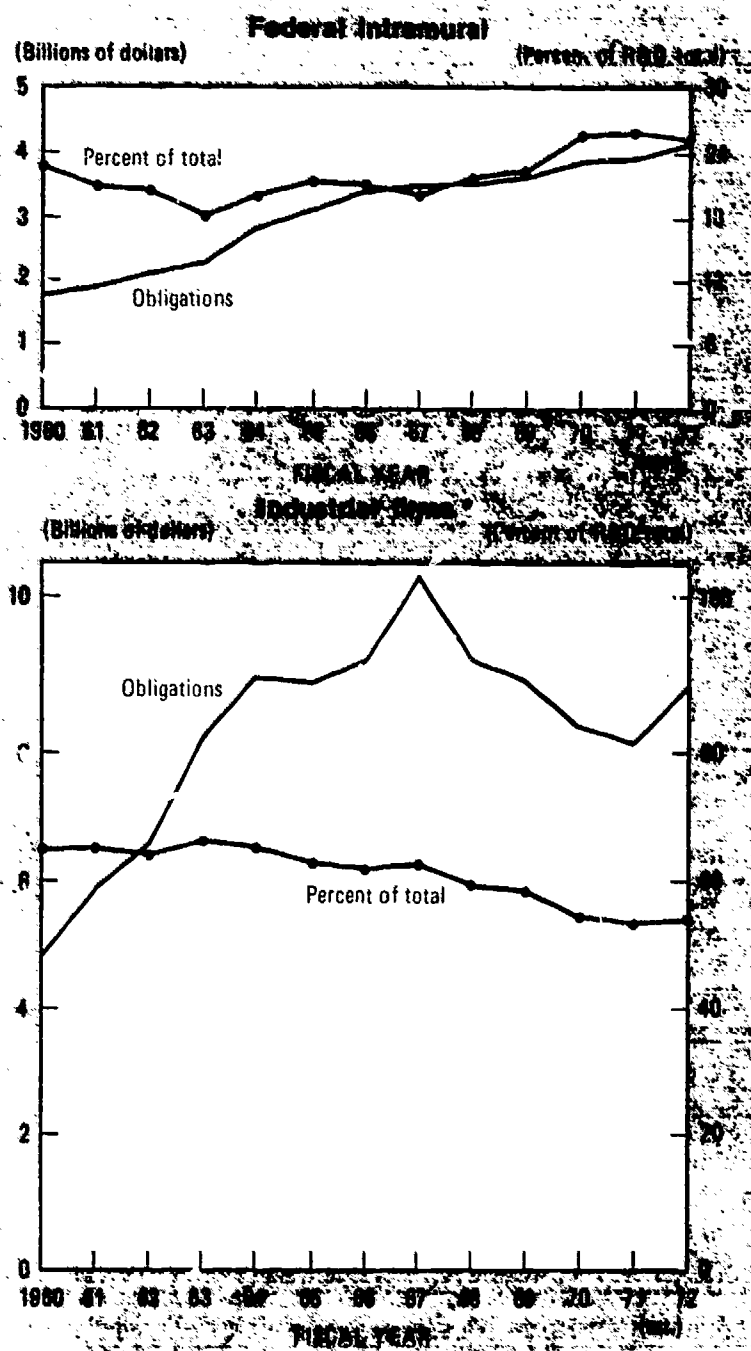
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**Federal R&D obligations by performer group
 in dollars and in share of R&D total**



* Includes Federally funded Research and Development Centers (FFRDC's) administered by academic firms.

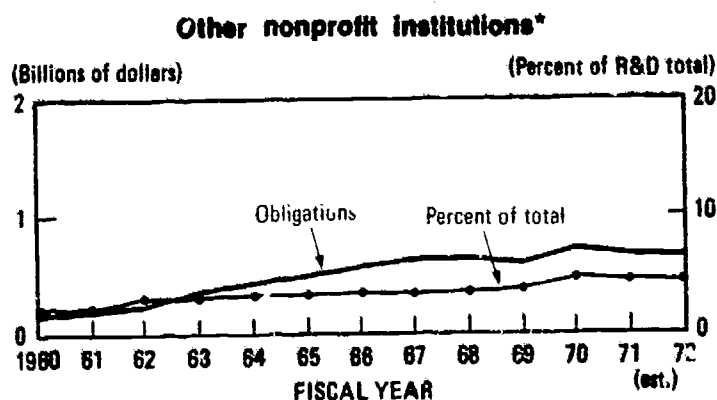
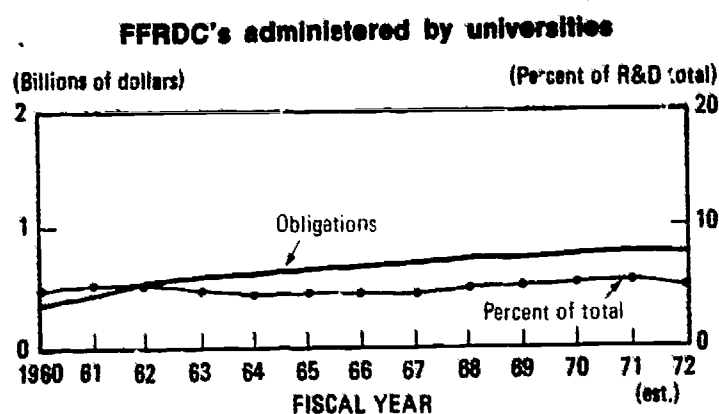
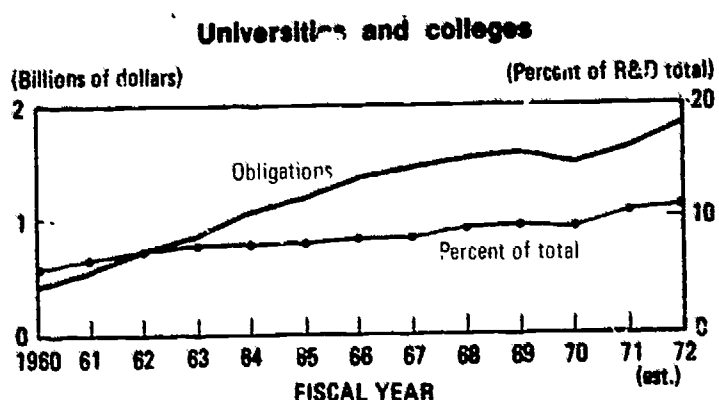
SOURCE: National Science Foundation

ing to industry while AEC accounts for approxi-
 mately 95 percent of Federal funding to
 industry administered FFRDC's. For many years
 industrial R&D performance for the Federal
 Government has been concentrated on develop-
 ment of weapons, reactors, spacecraft, launch
 vehicles, aircraft, and support systems.

- The buildup in the industry curve until 1967 was highly influenced by the manned space program (Apollo and its precursors), and the decline thereafter was chiefly brought about by the successful fulfillment of the development phase of the Apollo program. DOD development work sometimes augmented, and sometimes counteracted, these trends.
- In the current (1970-72) period industrial firms (including FFRDC's) account for 53 percent to 55 percent of all Federal R&D performance, contrasted with a 58- to 66-percent range during the 1960's.
- With one exception, R&D obligations to universities and colleges since 1960 have increased each year; 1970 was the exceptional year, with a 4-percent drop. The share of this sector in the Federal R&D total has gradually moved upward. In 1960 it was 6 percent, but by 1971 and 1972 it is expected to be 11 percent.
- The increases in dollars and in share are indicative of widespread Federal agency use of academic resources. Recent growth has been spurred by HEW and NSF, while DOD, NASA, and AEC continue to use universities and colleges extensively even though their support to this sector is not expanding.
- FFRDC's administered by universities have received between 4 percent and 5 percent of the Federal R&D support total since 1960, and obligations directed to them have grown slowly and steadily. In the current period their share is 5 percent.

- Other nonprofit institutions (including FFRDC's) have received increased support almost steadily since 1960 and in 1971 and 1972 are expected to represent 4 percent of the Federal R&D total.

Federal R&D obligations by performer group in dollars and in share of R&D total



* Includes Federally Funded Research and Development Centers (FFRDC's) administered by nonprofit institutions.
SOURCE: National Science Foundation

FFRDC's

- Federally Funded Research and Development Centers (FFRDC's) are R&D-performing or managing organizations exclusively or substantially financed by one or more Federal agencies. They share the unique advantage of gathering in one location a nucleus of scientists, engineers, and technicians who represent a wide range of disciplines and talents. These specialists work on complex problems in an atmosphere that permits unusual freedom of exchange. The nonprofit character of the FFRDC's makes for objectivity of judgment.

- The chief agency sponsor of FFRDC's is AEC, which operates virtually no laboratories of its own. AEC predominates in the use of industry- and university-administered FFRDC's. They investigate atomic behavior, work on reactor technology, and carry out weapons development and testing.

Federal R&D obligations to Federally Funded Research and Development Centers by administering sector and agency

| | [Dollars in millions] | | |
|------------------------------|-----------------------|--------------|--------------|
| | TOTAL | AEC | DOD |
| TOTAL | \$1,449 | \$915 | \$310 |
| Industrial firms | 479 | 464 | 9 |
| Universities and colleges | 762 | 432 | 146 |
| Other nonprofit institutions | 208 | 19 | 155 |

Note: See appendix B for list of FFRDC's.

PERFORMERS

FFRDC's

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- The chief agency sponsor of FFRDC's is AEC, which operates virtually no laboratories of its own. AEC predominates in the use of industry- and university-administered FFRDC's. They investigate atomic behavior, work on reactor technology, and carry out weapons development and testing.
- DOD predominates in the sponsorship of FFRDC's administered by other nonprofit institutions. It nearly equaled NASA in 1971 in support of university-administered FFRDC's.
- HEW's 27 FFRDC's in 1971 were all sponsored by the Office of Education. They seek solutions to problems in education and apply and test new ideas and theories.
- Of NSF's five university or university-consortia-administered FFRDC's, four are astronomical observatories and the fifth is the National Center for Atmospheric Research.

Federal R&D obligations to Federally Funded Research and Development Centers, by administering sector and agency, FY 1971 (est.)

[Dollars in millions]

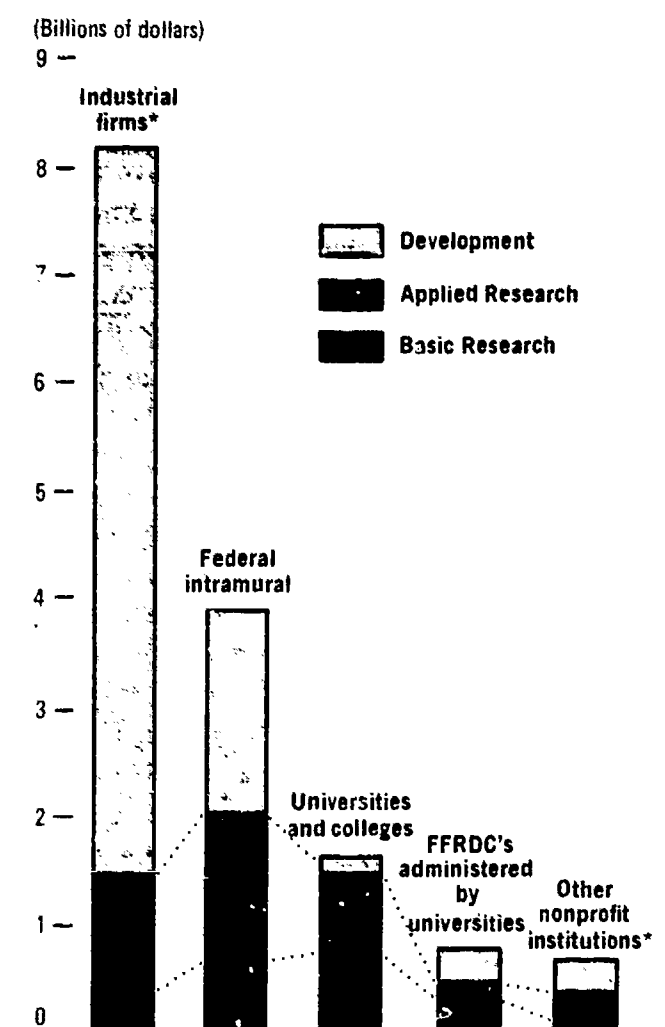
| | TOTAL | AEC | DOD | NASA | HEW | NSF | OTHER |
|------------------------------|----------------|--------------|--------------|--------------|-------------|-------------|------------|
| TOTAL | \$1,449 | \$915 | \$310 | \$149 | \$35 | \$33 | \$7 |
| Industrial firms | 479 | 464 | 9 | 3 | — | 1 | 2 |
| Universities and colleges | 762 | 432 | 146 | 145 | 7 | 31 | 1 |
| Other nonprofit institutions | 208 | 19 | 155 | 1 | 28 | 1 | 4 |

Note: See appendix B for list of FFRDC's.

CHARACTER OF WORK

- Industry is the leading R&D performance sector, and work in this sector is concentrated in development (82 percent of the industry R&D total in 1971). Industrial firms in 1971 were expected to accomplish $2\frac{1}{2}$ times the development of all other sectors combined.
- However, research is also performed by industry, and the dollar amount in 1971 was scheduled to be almost the same as research performed by universities and colleges for Federal agencies. But within the industry research effort, basic research is much less important than applied research.
- The Federal intramural sector is second in size of R&D performance as well as second in size of the development effort in 1971 (after industry) and second in size of basic research performed (after universities and colleges). Yet this sector is first in the amount of applied research performed. In 1971 the Federal sector accounted for 37 percent of all federally supported applied research.
- In 1971 approximately three-fifths of the intramural R&D total represented personnel costs, i.e., salaries and related allowances for scientists and engineers and other intramural support personnel. The share for personnel costs was about the same for performance of basic research, applied research, and development.

Obligations for performance of Federal research and development by performer and by character of work, FY 1971 (est.)

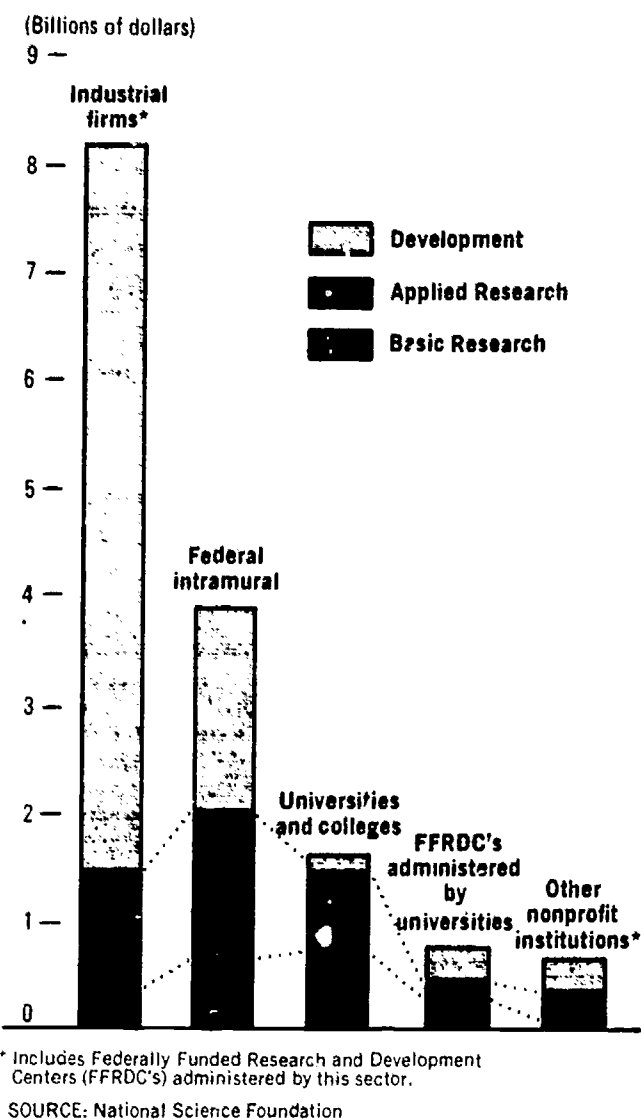


* Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

SOURCE: National Science Foundation

- Universities and colleges are generally considered the most logical sector for the performance of basic research, and they have led in its performance for many years. In 1971 they were the only sector where basic research was almost one-half of the total Federal research and development performed. That year they were also expected to account for 34 percent of the federally supported basic research undertaken in all sectors.

Obligations for performance of Federal research and development by performer and by character of work, FY 1971 (est.)



- FFRDC's administered by universities continue to be focused more on development and on basic research than on applied research. In 1971 they were expected to conduct more development than universities and colleges proper.
- Other nonprofit institutions in 1971 are most heavily engaged in applied research although in some past years development has predominated.

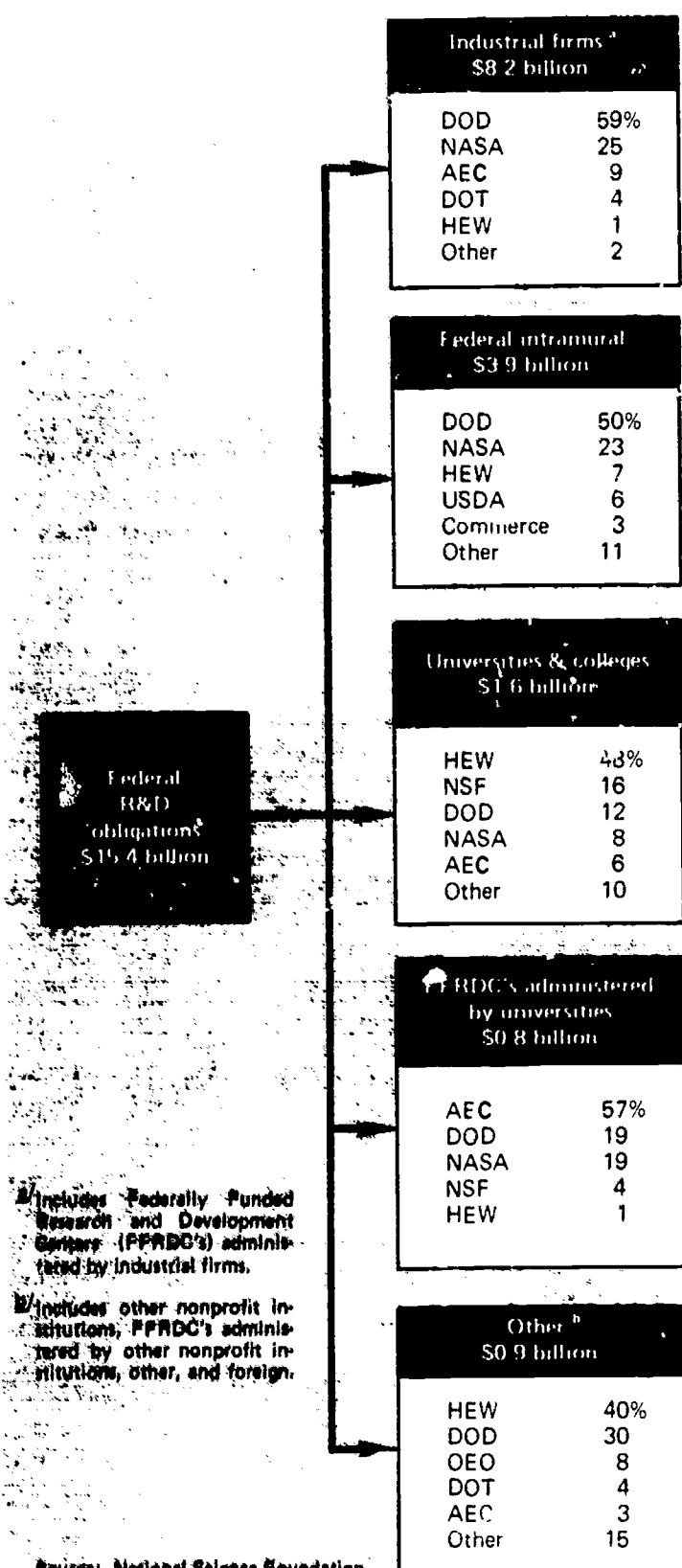
AGENCIES

- In each sector one or two agencies provide the dominant support.
- Except among universities and colleges, DOD is either the first or second agency in each sector in dollar support.

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- NASA or HEW appears as either the first or second support agency in four sectors out of five.
- The relative shares of support provided by different agencies vary over time, but the present pattern is fairly representative of recent years.

**Federal R&D obligations to performers,
by agency, FY 1971 (est.)**



FOREIGN PERFORMERS

This category includes only foreign scientists, organizations, or governments that carry on federally sponsored R&D projects outside the United States.¹ R&D work is contracted for in other countries because of unique natural conditions, or unusual materials, or specialized talents or facilities required for the conduct of particular projects, which are found in these countries and not in the United States.

- Foreign performance in 1971 was expected to amount to \$68 million, approximately two-fifths of 1 percent of the Federal R&D total; the requested figure for 1972 is \$76 million.
- Federal agencies support foreign research and development from two sources: (1) regular appropriations and (2) "special foreign currency programs," which use excess foreign currencies made available largely under provisions of the Agricultural Trade Development and Assistance Act of 1954 (Public Law 480), as amended.
- Since 1965 there has been a general upward trend in foreign research and development supported through special foreign currency programs, and a general downward trend in that supported by regular appropriations. The distribution of foreign R&D obligations by country is increasingly determined by the availability of excess currencies.

¹ Excluded are funds for federally financed projects performed abroad by U.S. Government employees or Federal agencies or by private U.S. organizations; also funds for support of American scientists working abroad or foreign scientists working in the United States.

FOREIGN PERFORMERS

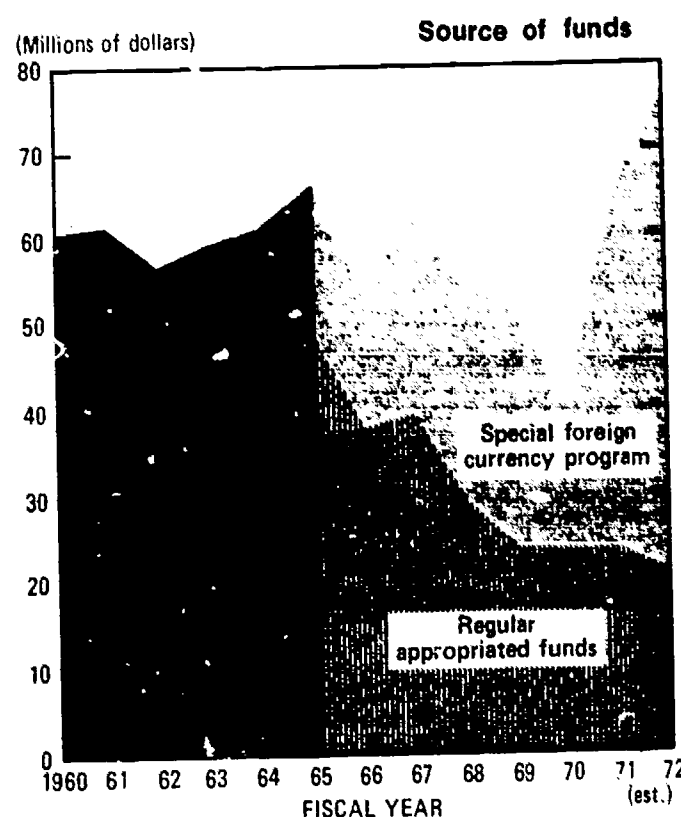
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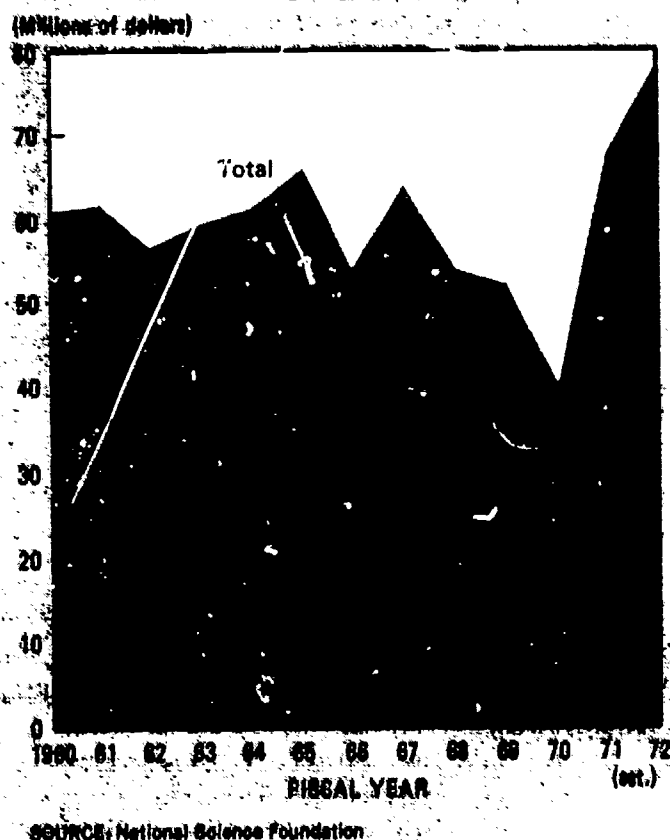
PERFORMERS

Trends in Federal R&D obligations to foreign performers



- HEW is the leading agency user of excess foreign currencies for R&D performance while DOD is the leading agency user of regular appropriations.
- More than 4 out of every 5 dollars obligated for foreign performance in the current period are scheduled for research support, with applied research receiving the greatest share.

Trends in Federal R&D obligations to foreign performers
By agency



Agencies and Regions

- Three agencies, HEW, DOD, and Agriculture, have provided more than 75 percent of Federal support to foreign R&D performance throughout the 1960–72 period.
- Within HEW, the National Institutes of Health, the Health Services and Mental Health Administration, and the Social and Rehabilitation Service are the major contributors to foreign research and development. Most of HEW's support goes to countries designated as excess foreign currency areas. Five such countries—Yugoslavia, India, Poland, Israel, and Pakistan—together were expected to receive 73 percent of the 1971 total.
- Within DOD, the Navy is the largest source of foreign R&D support in the current period. DOD's support is scattered widely; Europe receives more of the funds than any other region, and Canada receives more funds than any other country.
- All of USDA's support is provided through the special foreign currency program. The Agricultural Research Service is the major contributor, with Yugoslavia, India, Pakistan, and Israel the major countries supported.
- Throughout the 1960–72 period Europe has remained the major foreign region used for foreign R&D projects. Since 1968 Yugoslavia has been the leading European country supported, and since 1969 it has been the leading recipient of funds among all countries.
- Asia, the second region in support, is scheduled for a doubling in its support level in 1971, mainly the result of substantial increases to India and Pakistan.
- Israel continues to be the chief performing country in the Near East. It receives most of its funds from HEW and USDA.

(For detailed data on this section see appendix tables C-7 through C-12, C-29 through C-31, C-48 through C-50, C-67 through C-69, C-74 through C-81, C-88 through C-91, C-103 through C-107.)

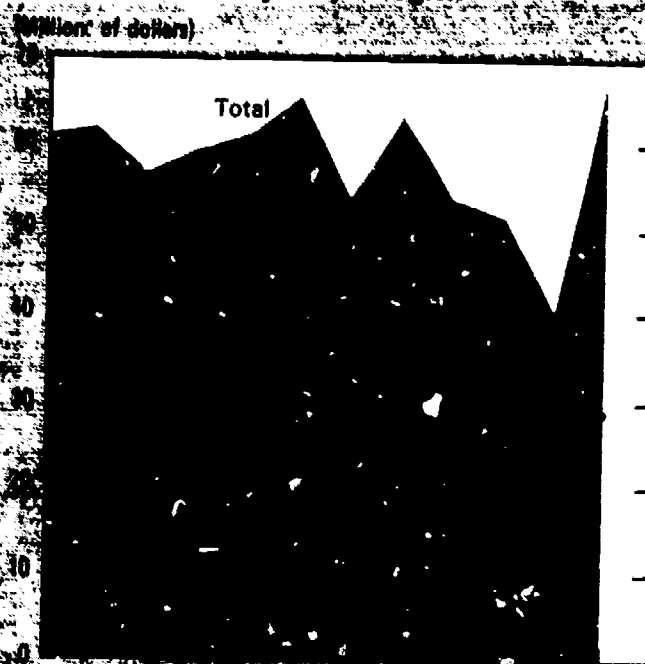
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Trends in Federal R&D obligations to foreign performers

By major region



SECTION 6. agencies

Federal agencies have increasingly turned to research and development as a means of accomplishing a number of ends. In broad terms, agencies use the methodology and resources of science because of:

- (1) their heavy dependence on the development and operation of advanced machinery and instrumentation, or
- (2) their need to create new programs or redirect existing ones, or
- (3) their own position as a source of support for fundamental research to further the Nation's knowledge base.

THE CURRENT PERIOD

Between 1969 and 1972 the leading R&D support agencies

Federal obligations for research and

(Dollars in millions)

| Agency | 1969 |
|--|----------|
| Total..... | \$15,633 |
| Department of Defense..... | 7,699 |
| National Aeronautics and Space Administration..... | 3,963 |
| Department of Health, Education, and Welfare..... | 1,291 |
| Atomic Energy Commission..... | 1,408 |
| Department of Transportation..... | 227 |
| National Science Foundation..... | 271 |
| Department of Agriculture..... | 261 |
| Department of the Interior..... | 207 |
| Department of Commerce..... | 71 |
| Environmental Protection Agency..... | 71 |
| Office of Economic Opportunity..... | 15 |
| Other agencies..... | 15 |

* Less than 0.5 percent.

- While total Federal R&D obligations are scheduled to increase 7 percent from 1969 to 1972, three of the important R&D agencies—NASA, AEC, and Interior— reveal net decreases, although the decrease for Interior is slight.
- NASA's estimate for 1972 represents the smallest year-to-year reduction since the downward trend for this agency started in 1967. The increases planned in a number of key programs almost offset decreases in the Apollo lunar landing program, which is scheduled for completion in 1972. These growing programs include the Skylab and the space shuttle transportation system; the Viking unmanned orbiter-lander exploration of Mars; the Grand Tour unmanned missions to the outer planets; and the earth resources satellite, which will provide information on the utilization of data from space toward understanding and managing earth resources.

AGENCIES

THE CURRENT PERIOD

Between 1969 and 1972 the leading R&D support agencies showed the following changes in funding:

Federal obligations for research and development, by agency

(Dollars in millions)

| Agency | Actual | | | Estimates | | | |
|--|----------|----------|------------------------|-----------|------------------------|----------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total..... | \$15,637 | \$15,330 | -2.0 | \$15,387 | (*) | \$16,662 | +8.3 |
| Department of Defense..... | 7,696 | 7,360 | -4.4 | 7,420 | +0.8 | 8,332 | +12.3 |
| National Aeronautics and Space Administration..... | 3,963 | 3,800 | -4.1 | 3,248 | -14.5 | 3,188 | -1.8 |
| Department of Health, Education, and Welfare..... | 1,297 | 1,221 | -5.9 | 1,480 | +21.2 | 1,635 | +10.5 |
| Atomic Energy Commission..... | 1,406 | 1,346 | -4.3 | 1,307 | -2.9 | 1,251 | -4.2 |
| Department of Transportation..... | 228 | 317 | +39.0 | 437 | +37.6 | 483 | +10.6 |
| National Science Foundation..... | 274 | 289 | +5.5 | 345 | +19.4 | 494 | +43.3 |
| Department of Agriculture..... | 260 | 281 | +8.1 | 303 | +7.7 | 314 | +3.7 |
| Department of the Interior..... | 208 | 158 | -24.0 | 185 | +17.2 | 204 | +10.4 |
| Department of Commerce..... | 72 | 122 | +69.4 | 158 | +29.9 | 182 | +15.1 |
| Environmental Protection Agency..... | | 89 | | 116 | +31.3 | 144 | +24.3 |
| Office of Economic Opportunity..... | 71 | 123 | +73.2 | 116 | -6.3 | 100 | -13.5 |
| Other agencies..... | 162 | 224 | +38.3 | 272 | +21.4 | 335 | +22.8 |

* Less than 0.5 percent.

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- AEC's net decrease of 11 percent from 1969 to 1972 stems largely from cutbacks in the underground testing of nuclear weapons, in space propulsion systems, and in space electric power development. These reductions are partially offset by acceleration of the program to develop an economic liquid-metal fast-breeder power reactor.
- Interior's net decrease resulted from a 1970 drop that was entirely due to the transfer of the Bureau of Commercial Fisheries to Commerce (NOAA) and the Federal Water Pollution Control Administration to EPA. Thereafter increases occurred, and the largest increase from 1970 to 1972 is for research and development related to health and safety hazards in mining.

- In 1972 DOD's programs are expected to grow substantially, and programs contributing to the large increase include work on the B-1 aircraft, the Safeguard antiballistic missile system, the undersea long-range ballistic missile system (ULMS), the F-15 fighter aircraft, and the A-X close air support aircraft. Partially offsetting the increases is the phasing down or the completion of development on such undertakings as the F-14 fighter/interceptor, the Minuteman intercontinental ballistic missile system, the Poseidon fleet ballistic missile, and the S-3A antisubmarine warfare aircraft.
- HEW, despite a drop from 1969 to 1970, is expected to record an overall gain of 26 percent in the 1969-72 period. Increases are brought about by vocational education research and innovative R&D programs in the Office of Education; research in heart disease and cancer in the National Institutes of Health; and the research and development sponsored by the recently organized Office of Child Development, to name some of the more outstanding programs.
- DOT's current increases derive from work on the supersonic transport aircraft¹ and also from research and development connected with air traffic control, urban mass transportation, and national highway safety programs.
- NSF shows one of the largest net gains among all agencies in the 1969-72 period, with an increase of 80 percent. It also reflects the largest relative increase of any agency from 1971 to 1972. Part of the 1972 rise is for programs transferred to NSF from other agencies, such as the National Magnet Laboratory from DOD (Air Force), the interdisciplinary material sciences laboratories from DOD's

Advanced Research Projects Agency, and logistic support for the U.S. Antarctic research program from DOD (Navy). Other parts of the 1972 rise cover expanded support to coordinated research efforts to develop scientific knowledge for the solution of national problems and increased support of basic research in all major scientific disciplines.

- Commerce recorded a large increase in its R&D programs from 1969 to 1970, due largely to the transfer of various marine-related activities from Interior, DOD, DOT, and NSF to the new National Oceanic and Atmospheric Administration (NOAA) within Commerce. The R&D programs of NOAA, which also includes the former Environmental Science Services Administration (ESSA), are expected to increase substantially from 1970 to 1972.
- The Environmental Protection Agency (EPA) conducts research and development in the areas of water and air pollution, pesticides, radiation, and solid wastes. These programs were formerly performed by HEW, Interior, and USDA. All these areas are expected to receive increased emphasis from 1970 to 1972.

¹ Data do not reflect congressional action on funds for the SST for the last 3 months of fiscal year 1971 or any action for 1972.

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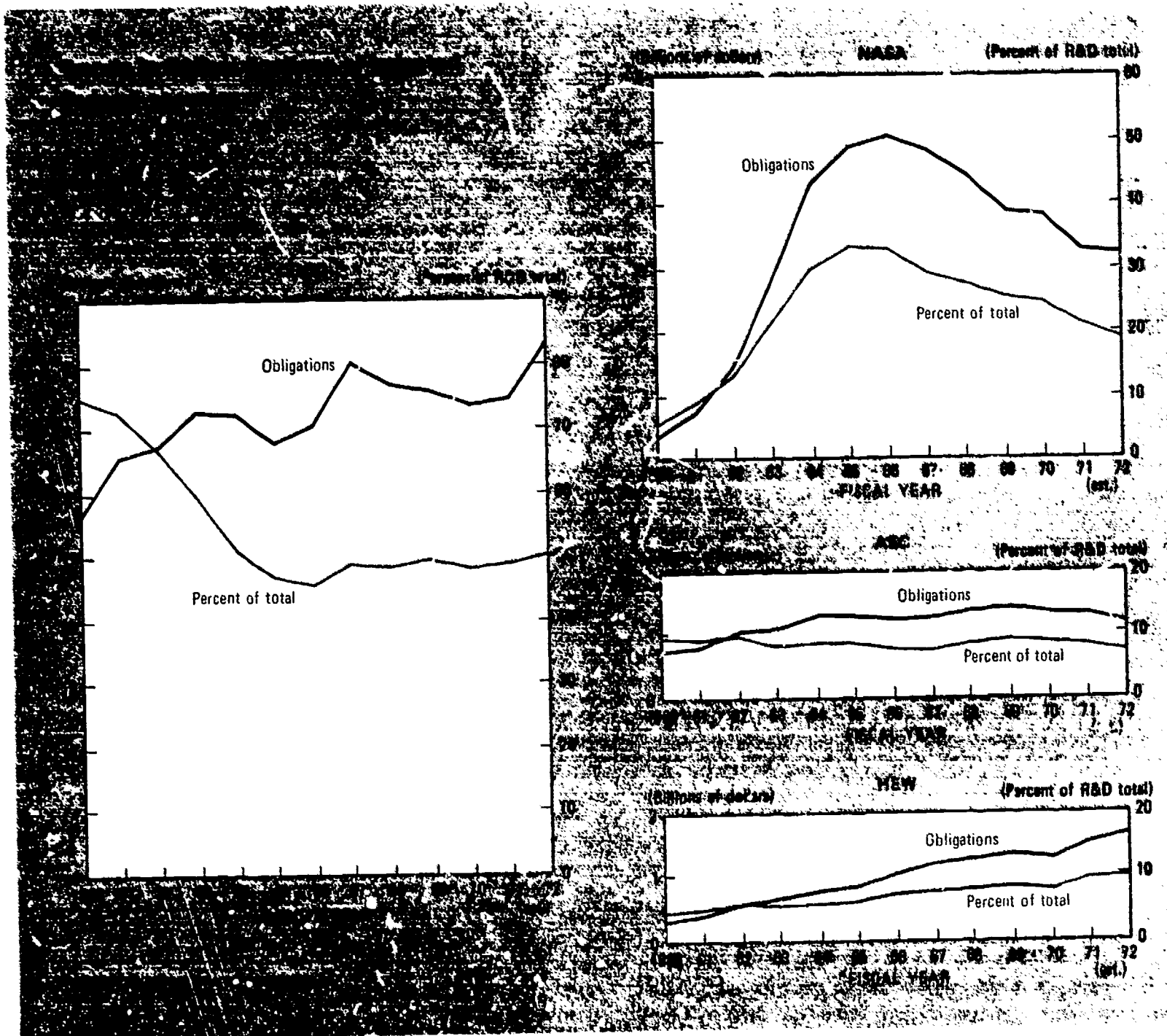
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TRENDS

- During the 1960-67 period, while DOD's R&D obligations were increasing, its share of the R&D total was decreasing—from 76 percent to 49 percent. From 1967 to 1970 a moderate decline was experienced. DOD's 1972 estimate represents the first significant increase since 1967, but its share of the Federal R&D total is little affected.
- NASA's R&D program totals have declined each year since the 1966 peak, and NASA's share of the Federal R&D total has also declined since that time—from 33 percent to an estimated 19 percent in 1972.
- AEC's obligations grew steadily from 1960 to 1969, but in recent years they have declined. AEC accounted for 10 percent of the R&D total in 1960, compared with an estimated 8 percent for 1972.
- The combined R&D programs of DOD, NASA, and AEC dropped from 91 percent of the R&D total in 1960 to 86 percent in 1967 and are expected to decrease further to 77 percent in 1972.
- The programs of DOD, NASA, and AEC are complementary in a number of ways, and many of them are conducted jointly. Their missions tend to be concerned with putting into operation complex end products of technology that involve advanced engineering and systems management. Their R&D requirements lean toward the same fields of science, draw on the same kinds of performers and often the same contractors.
- In 1971 HEW became the third largest R&D supporter. Its R&D obligations reveal the reverse of the DOD-NASA-AEC trend. They have increased from \$320 million in 1960 to an estimated \$1.6 billion in 1972, with only one year of decline; meanwhile HEW's share of the R&D total shows an increase from 4 percent to 10 percent.

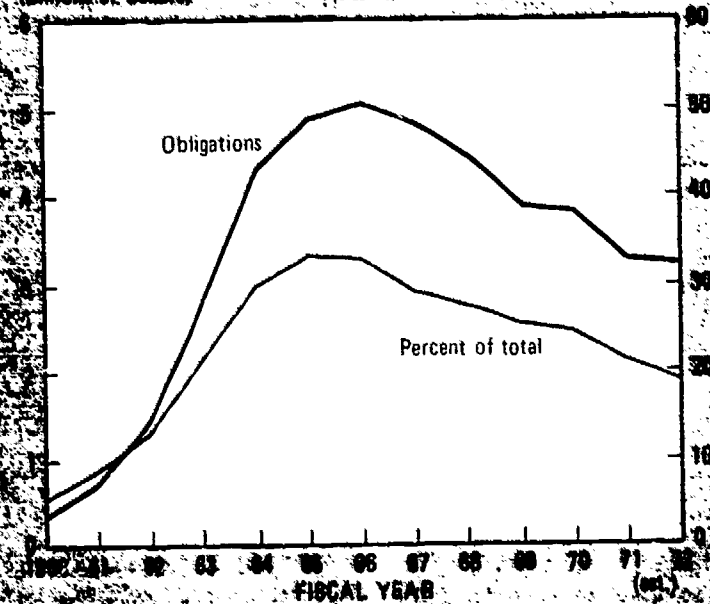


- However, other agencies have also played a growing part in the overall support of research and development. In the current period 29 other agencies reported R&D obligations. In the 1960-72 period the combined R&D total of the "other agency" group will have increased from \$389 million to a projected \$2.3 billion, and their share of the Federal R&D total from 5 percent to 14 percent.

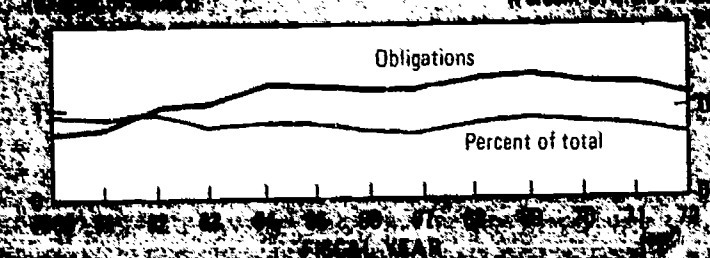
- DOT, NSF, USDA, Interior, Commerce, and OEO are chiefly responsible for the significant gains of the "other agency" group. The R&D programs of most of the agencies in this group as well as HEW are more research oriented than those of DOD-NASA-AEC. DOT and the Postal Service are the only agencies in the "other agency" group primarily engaged in development in the machinery-and-systems areas.

AGENCIES

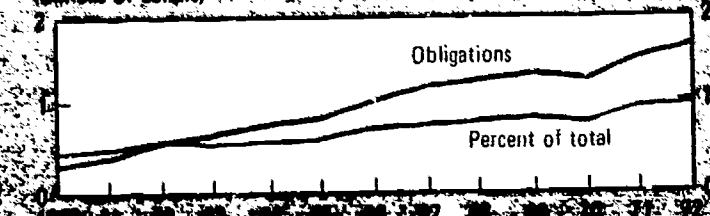
NASA (Percent of R&D total)



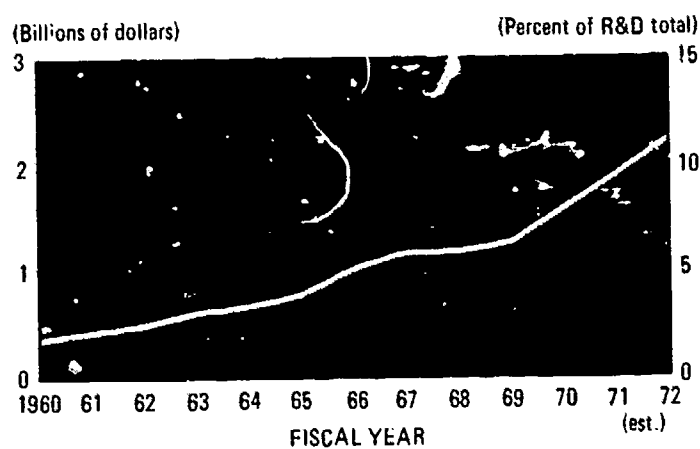
AEC (Percent of R&D total)



HEW (Percent of R&D total)

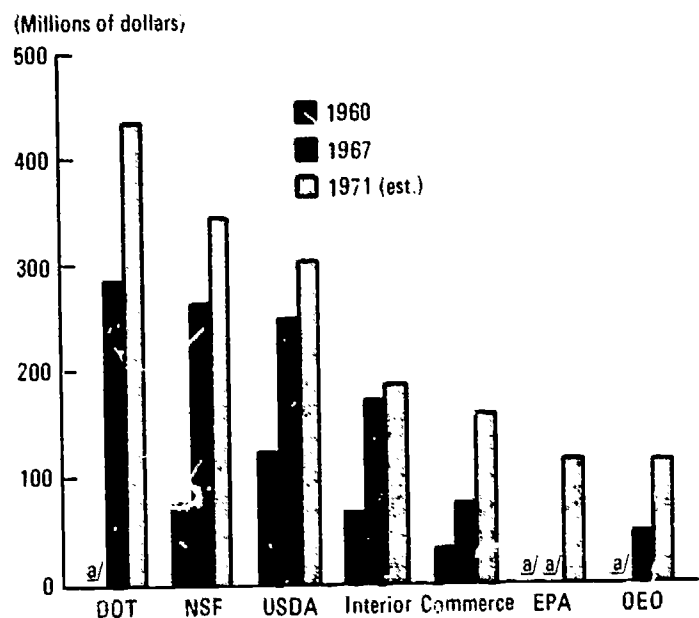


Trends in R&D obligations of the "other" Federal agencies*



* DOD, NASA, HEW, and AEC excluded.

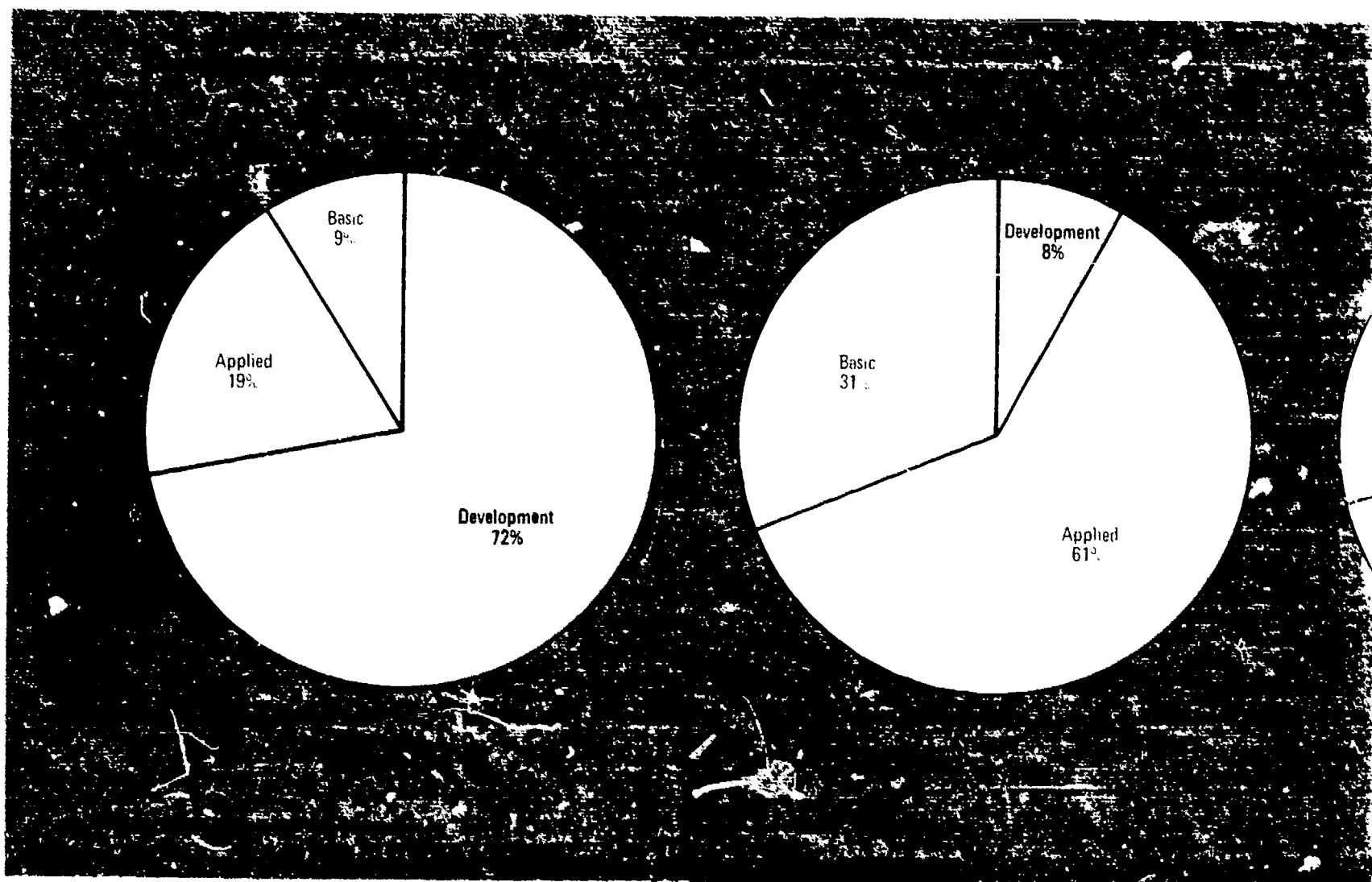
R&D obligations of selected Federal agencies



a/ Not in existence.

SOURCE: National Science Foundation

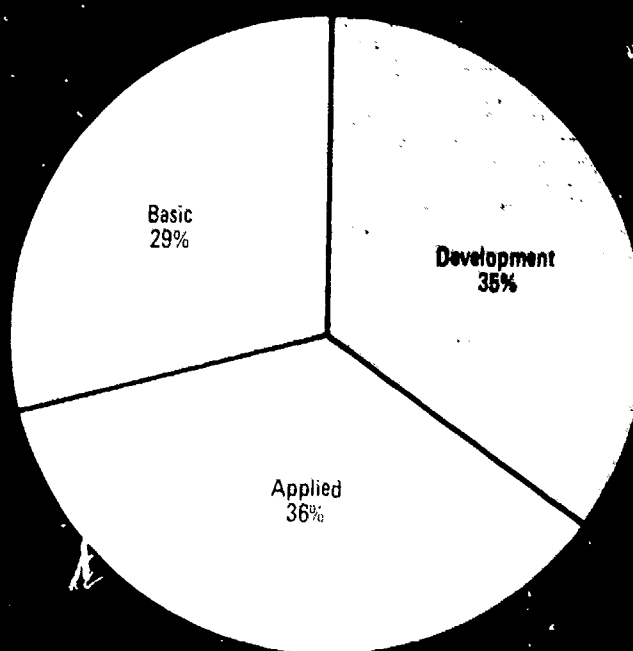
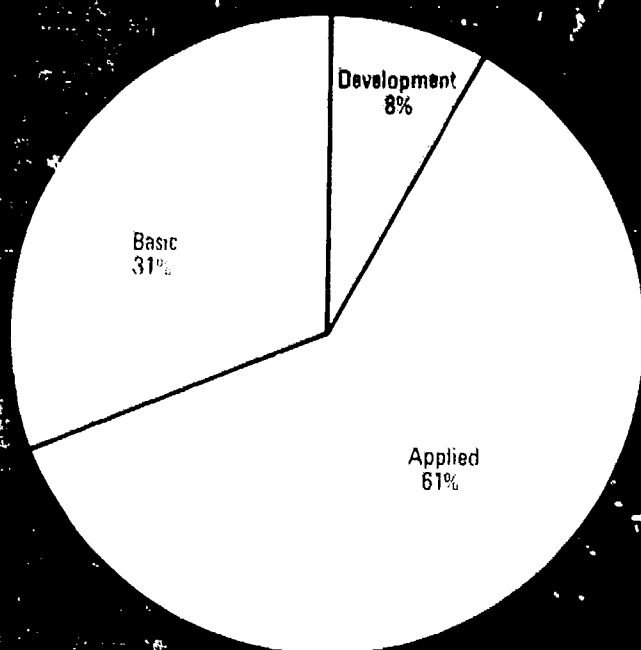
- DOT, NSF, USDA, Interior, Commerce, and OEO are chiefly responsible for the significant gains of the "other agency" group. The R&D programs of most of the agencies in this group as well as HEW are more research oriented than those of DOD-NASA-AEC. DOT and the Postal Service are the only agencies in the "other agency" group primarily engaged in development in the machinery-and-systems areas.



CHARACTER OF WORK

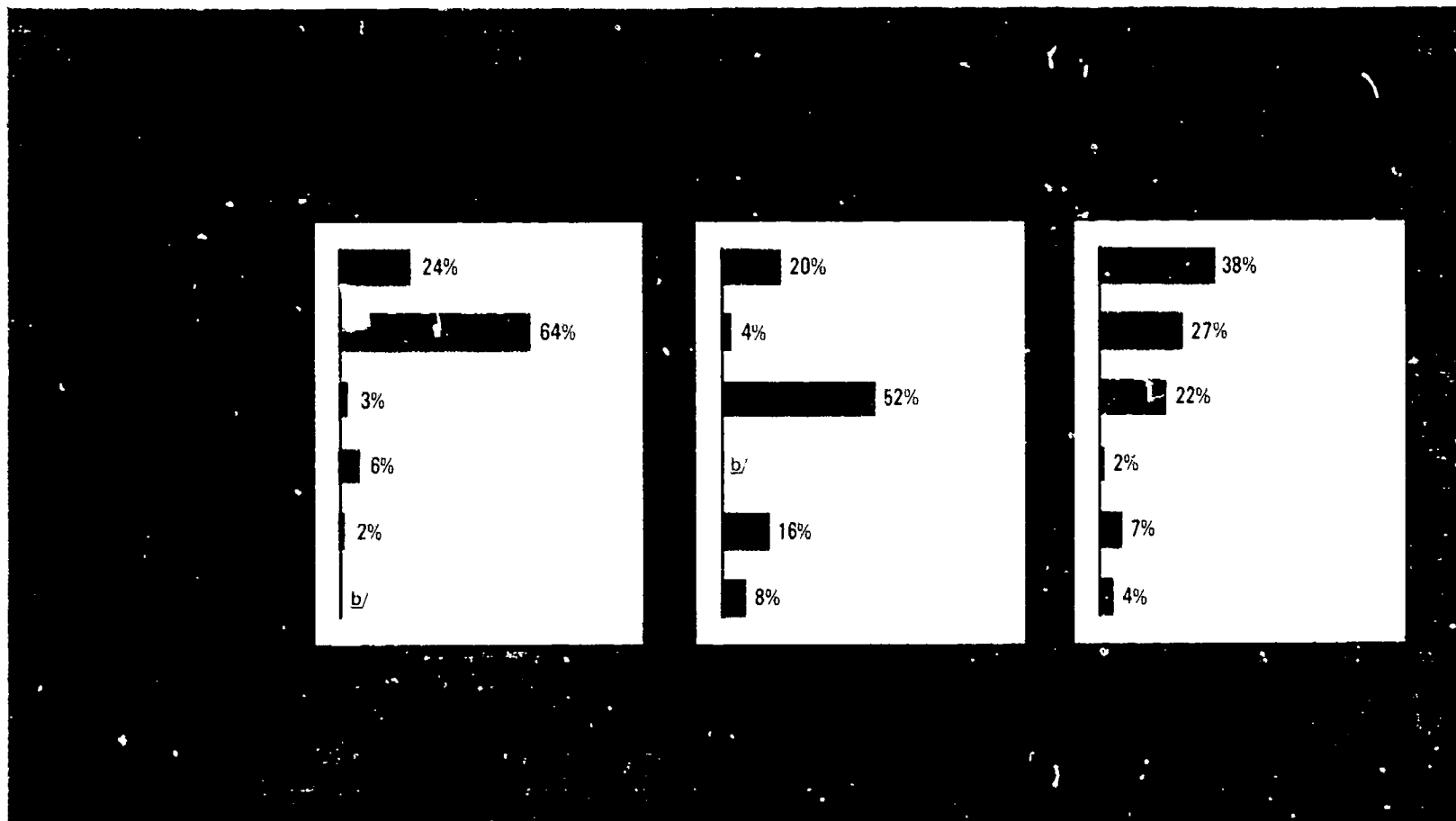
- In 1971 the share of development in the combined R&D total of DOD, NASA, and AEC was expected to be 72 percent. For HEW it was expected to be 8 percent and for the "other" agencies, 35 percent.
- The 29 "other" agencies and HEW are more concerned with socially oriented development than the DOD-NASA-AEC group, which concentrates development on costly and complex hardware items. The "other" agencies and

HEW are involved with such problems as the development of working program models from accepted hypotheses concerning the causes of poverty; the determination of public acceptance of different means of mass transportation; experimental schools; curriculum development; the development of improved procedures for preparation, care, and preservation of food; and the development of evaluative instruments and norms for young children. The chief exception to development of the foregoing nature in the "other agency" group is DOT's work on the SST aircraft.



HEW are involved with such problems as the development of working program models from accepted hypotheses concerning the causes of poverty; the determination of public acceptance of different means of mass transportation; experimental schools; curriculum development; the development of improved procedures for preparation, care, and preservation of food; and the development of evaluative instruments and norms for young children. The chief exception to development of the foregoing nature in the "other agency" group is DOT's work on the SST aircraft.

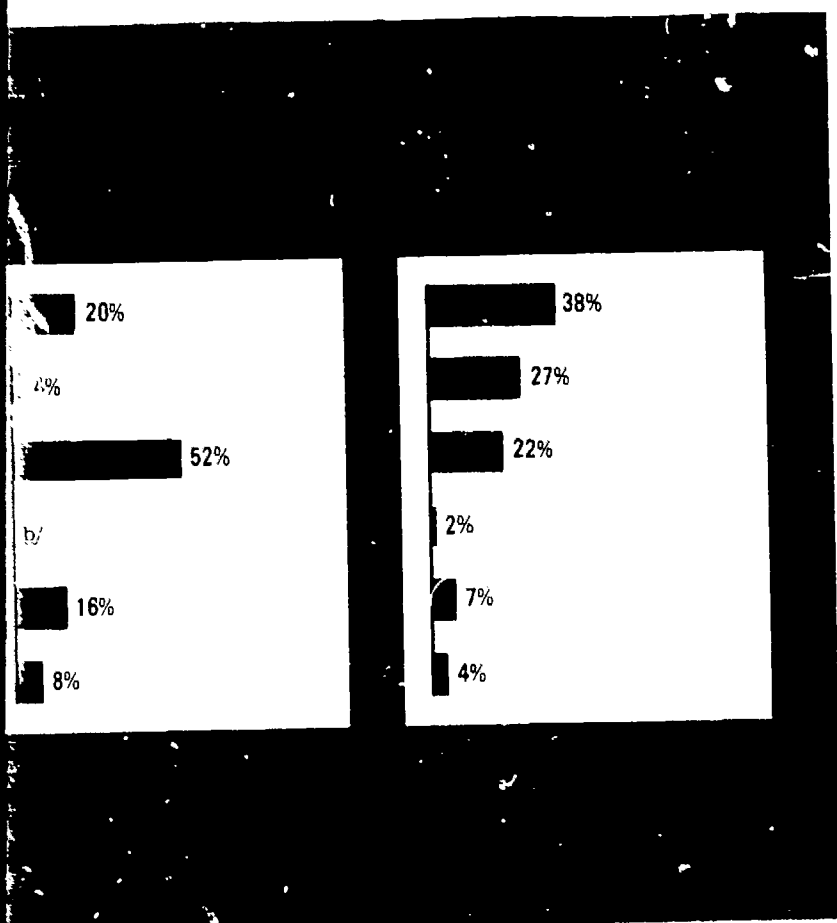
- The share of applied research in the DOD-NASA-AEC R&D total was expected to be only 19 percent in 1971, compared with 36 percent within the "other agency" total and 61 percent within the HEW total.
- The share of basic research in the DOD-NASA-AEC total was expected to be only 9 percent in 1971, but it was more than three times that percentage for HEW and "other" agencies.



PERFORMERS

- Industrial firms make up by far the largest performing sector for the DOD-NASA-AEC group, accounting for an estimated 64 percent of its R&D total in 1971. By contrast, industrial performance was expected to represent only 4 percent of the HEW total and 27 percent of the "other agency" total in 1971.
- Universities and colleges were expected to receive more than 50 percent of HEW's R&D funds and 22 percent of the "other agency" funds in 1971, whereas DOD-NASA-AEC planned to direct only 3 percent of their joint R&D obligations to this sector.
- The Federal intramural sector is strong in all three agency groups. It is the largest performing sector for the "other agency" group.

AGENCIES



- Universities and colleges were expected to receive more than 50 percent of HEW's R&D funds and 22 percent of the "other agency" funds in 1971, whereas DOD-NASA-AEC planned to direct only 3 percent of their joint R&D obligations to this sector.
- The Federal intramural sector is strong in all three agency groups. It is the largest performing sector for the "other agency" group.

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)

| Agency and subdivision | Total R&D obligations (millions of dollars) | R&D obligations as percent of total agency budget ^a | Total research and development | | | | | Basic research | | Applied research | | Development |
|-------------------------------------|---|--|--|------------------|-------------|--|--|--|---|---|--|-------------|
| | | | Character of work (percent distribution) | | | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | | | |
| | | | Basic research | Applied research | Development | | | | | | | |
| | | | | | | | | | | | | |
| Department of Agriculture, total | \$302.8 | 4 | 41 | 56 | 3 | 75 Intra. 22 Univ. | 66 Life 15 Phy. Sci. 9 Soc. 9 Eng. | 74 Intra. 22 Univ. | 58 Life 15 Soc. 12 Phy. Sci. 12 Eng. | 74 Intra. 24 Univ. | 95 Intra. | |
| Agricultural Research Service | 172.3 | — | 45 | 50 | 5 | 94 Intra. | 69 Life 20 Phy. Sci. 11 Eng. | 93 Intra. | 62 Life 20 Phy. Sci. 16 Eng. | 96 Intra. | 94 Intra. | |
| Cooperative State Research Service | 67.0 | — | 38 | 62 | — | 96 Univ. | 69 Life 22 Soc. | 96 Univ. | 69 Life 22 Soc. | 96 Univ. | — | |
| Economic Research Service | 15.7 | — | 29 | 71 | — | 99 Intra. | 100 Soc. | 99 Intra. | 100 Soc. | 99 Intra. | — | |
| Farmer Cooperative Service | .9 | — | 25 | 75 | — | 92 Intra. 8 Univ. | 100 Soc. | 100 Intra. | 100 Soc. | 89 Intra. 11 Univ. | — | |
| Forest Service | 45.9 | — | 34 | 64 | 2 | 97 Intra. | 70 Life 10 Phy. Sci. 10 Eng. 8 Environ. | 92 Intra. | 58 Life 17 Eng. 10 Soc. 9 Environ. | 100 Intra. | 100 Intra. | |
| National Agricultural Library | .3 | — | — | 100 | — | 39 Intra. 39 N.P. 12 Ind. 10 Univ. | — | — | 100 Other | 39 Intra. 39 N.P. 12 Ind. 10 Univ. | — | |
| Statistical Reporting Service | .7 | — | 11 | 58 | 31 | 76 Intra. 14 Ind. 11 Univ. | 83 Math. 17 Soc. | 51 Intra. 49 Univ. | 63 Soc. 37 Math. | 68 Intra. 23 Ind. 9 Univ. | 100 Intra. | |
| Department of Commerce, total | 157.9 | 12 | 31 | 50 | 19 | 70 Intra. 20 Ind. | 31 Environ. 27 Phy. Sci. 19 Life 10 Soc. 10 Eng. | 92 Intra. | 33 Eng. 29 Life 18 Environ. 8 Phy. Sci. | 67 Intra. 24 Ind. | 45 Ind. 43 Intra. | |
| Bureau of the Census | 4.3 | — | 10 | 41 | 49 | 99 Intra. | 58 Math. 36 Psych. | 85 Intra. 8 Univ. | 60 Soc. 34 Psych. | 100 Intra. | 100 Intra. | |
| Economic Development Administration | 5.4 | — | — | 34 | 66 | 30 Univ. 29 Intra. 26 Ind. 10 Other | — | — | 100 Soc. | 36 Intra. 36 Ind. 24 Univ. | 37 Univ. 25 Intra. 22 Ind. 14 Other | |
| Maritime Administration | 24.3 | — | — | 72 | 28 | 92 Ind. | — | — | 91 Eng. 9 Soc. | 93 Ind. | 89 Ind. 11 Univ. | |
| National Bureau of Standards | 31.7 | — | 47 | 44 | 9 | 97 Intra | 77 Phy Sci. 20 Eng | 97 Intra. | 50 Eng. 36 Phy. Sci. 9 Other | 97 Intra. | 91 Intra. 9 For. | |

| | | | | | | | | | | | | |
|--|---------|----|-----|-----|----|--|--|---------------------------------|---|---|--|--|
| Forest Service..... | 45.9 | — | 34 | 64 | 2 | 97 Intra. | 70 Life 10 Phy. Sci. 10 Eng. 8 Environ. | 92 Intra. | 58 Life 17 Eng. 10 Soc. 9 Environ. | 11 Univ. 100 Intra. | 100 Intra. | 100 Intra. |
| National Agricultural Library..... | .3 | — | — | 100 | — | 39 Intra. 39 M.P. 12 Ind. 10 Univ. | — | — | 100 Other | 39 Intra. 39 M.P. 12 Ind. 10 Univ. | — | — |
| Statistical Reporting Service..... | .7 | — | 11 | 58 | 31 | 76 Intra. 14 Ind. 11 Univ. | 83 Math. 17 Soc. | 51 Intra. 49 Univ. | 63 Soc. 37 Math. | 68 Intra. 23 Ind. 9 Univ. | 100 Intra. | 100 Intra. |
| Department of Commerce, total..... | 157.9 | 12 | 31 | 50 | 19 | 70 Intra. 20 Ind. | 31 Environ. 27 Phy. Sci. 19 Life 10 Soc. 10 Eng. | 92 Intra. | 33 Eng. 29 Life 18 Environ. 8 Phy. Sci. | 67 Intra. 24 Ind. | 45 Ind. 43 Intra. | 45 Ind. 43 Intra. |
| Bureau of the Census..... | 4.3 | — | 10 | 41 | 49 | 99 Intra. | 58 Math. 36 Psych. | 85 Intra. 8 Univ. | 60 Soc. 34 Psych. | 100 Intra. | 100 Intra. | 100 Intra. |
| Economic Development Administration..... | 5.4 | — | — | 34 | 66 | 30 Univ. 29 Intra. 26 Ind. 10 Other | — | — | 100 Soc. | 36 Intra. 36 Ind. 24 Univ. | 33 Univ. 25 Intra. 22 Ind. 14 Other | 33 Univ. 25 Intra. 22 Ind. 14 Other |
| Maritime Administration..... | 24.3 | — | — | 72 | 28 | 92 Ind. | — | — | 91 Eng. 9 Soc. | 93 Ind. | 89 Ind. 11 Univ. | 89 Ind. 11 Univ. |
| National Bureau of Standards..... | 31.7 | — | 47 | 44 | 9 | 97 Intra | 77 Phy. Sci. 20 Eng | 97 Intra. | 50 Eng. 36 Phy. Sci. 9 Other | 97 Intra. | 91 Intra. 9 For. | 91 Intra. 9 For. |
| National Oceanic and Atmospheric Administration..... | 85.0 | — | 33 | 50 | 17 | 78 Intra. 10 Ind. | 55 Environ. 33 Life | 87 Intra. | 54 Life 33 Environ. | 81 Intra. 9 Other | 50 Intra. 45 Ind. | 50 Intra. 45 Ind. |
| Office of Business Economics..... | 4.0 | — | 100 | — | — | 100 Intra. | 100 Soc. | 100 Intra | — | — | — | — |
| Office of Telecommunications..... | 2.6 | — | 82 | 18 | — | 100 Intra. | 53 Phy. Sci. 27 Eng. 20 Math. | 100 Intra. | 100 Eng. | 100 Intra. | — | — |
| Patent Office..... | .6 | — | — | 81 | 19 | 100 Intra. | — | — | 100 Other | 100 Intra. | 100 Intra. | 100 Intra. |
| Department of Defense, total..... | 7,420.2 | 10 | 3 | 17 | 80 | 65 Ind. 27 Intra. | 27 Phy. Sci. 25 Eng. 23 Environ. 12 Life 9 Math. | 46 Univ. 42 Intra. 9 Ind. | 70 Eng. 11 Phy. Sci. | 51 Ind. 37 Intra. | 70 Ind. 24 Intra. | 70 Ind. 24 Intra. |
| Department of the Army..... | 1,691.1 | — | 3 | 12 | 85 | 56 Ind. 38 Intra. | 35 Life 24 Phy. Sci. 22 Eng. 11 Environ. | 60 Intra. 33 Univ. | 52 Eng. 20 Phy. Sci. 14 Life | 75 Intra. 16 Ind. | 64 Ind. 32 Intra. | 64 Ind. 32 Intra. |
| Department of the Navy..... | 2,236.9 | — | 4 | 8 | 88 | 60 Ind. 33 Intra. | 35 Environ. 27 Phy. Sci. 15 Eng. 12 Life | 55 Univ. 37 Intra. | 54 Eng. 21 Phy. Sci. 12 Math. 8 Environ. | 67 Intra. 19 Ind. | 67 Ind. 29 Ind. | 67 Ind. 29 Ind. |

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)—Continued

| Agency and subdivision | Total R&D obligations (millions of dollars) | R&D obligations as percent of total agency budget ^a | Total research and development | | | | Basic research | | Applied research | | Development |
|--|---|--|--|------------------|-------------|---|---|--|---|---|--|
| | | | Character of work (percent distribution) | | | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | | |
| | | | Basic research | Applied research | Development | | | | | | |
| Department of the Air Force..... | 3,024.6 | — | 3 | 19 | 79 | 76 Ind. 16 Intra. | 34 Eng. 30 Phy. Sci. 26 Environ. | 51 Intra. 38 Univ. 10 Ind. | 92 Eng. | 76 Ind. 17 Intra. | 78 Ind. 15 Intra. |
| Defense Agencies..... | 414.0 | — | 8 | 67 | 26 | 45 Ind. 31 Intra. 8 Univ. | 35 Eng. 26 Math. 22 Phy. Sci. 13 Psych. | 58 Univ. 31 Ind. | 49 Eng. 18 Phy. Sci. 17 Environ. 9 Other | 47 Ind. 29 Intra. 9 N.P. FFRDC | 45 Ind. 43 Intra. |
| Departmentwide Funds..... | 53.6 | — | — | 7 | 93 | 82 Ind. 10 Univ. | — | — | 25 Eng. 17 Phy. Sci. 14 Other 13 Life 13 Soc. 10 Math. 8 Psych. | 35 Ind. 24 N.P. 13 Univ. 12 Intra. | 85 Ind. 10 Univ. |
| Department of Health, Education, and Welfare, total..... | 1,479.9 | 2 | 31 | 62 | 8 | 52 Univ. 20 Intra. 14 N.P. | 77 Life 8 Psych. | 55 Univ. 30 Intra. 9 N.P. | 78 Life 10 Soc. | 52 Univ. 17 N.P. 16 Intra. | 39 Univ. 21 N.P. FFRDC 15 N.P. 10 Intra. 9 Ind. |
| Food and Drug Administration..... | 25.9 | — | — | 100 | — | 57 Intra. 30 Univ. 8 For. | — | — | 62 Life 38 Phy. Sci. | 57 Intra. 30 Univ. 8 For. | — |
| Health Services and Mental Health Administration..... | 227.7 | — | 29 | 54 | 17 | 38 Univ. 24 Intra. 17 N.P. 8 Other | 39 Life 30 Soc. 30 Psych. | 49 Univ. 28 Intra. 16 N.P. | 75 Life 13 Psych. 11 Soc. | 30 Univ. 24 Intra. 18 N.P. 14 Other 13 For. | 43 Univ. 21 Intra. 18 Ind. 17 N.P. |
| National Institutes of Health..... | 1,038.5 | — | 36 | 63 | 1 | 58 Univ. 20 Intra. 14 N.P. | 86 Life 8 Phy. Sci. | 56 Univ. 31 Intra. | 90 Life | 60 Univ. 18 N.P. 13 Intra. | 57 Univ. 25 Ind. 9 Intra. |
| Office of Child Development..... | 5.5 | — | — | 36 | 64 | 64 Univ. 31 N.P. | — | — | 50 Soc. 25 Life 25 Psych. | 95 Univ. | 49 N.P. 46 Univ. |
| Office of Education..... | 133.2 | — | 9 | 42 | 49 | 37 Univ. 20 N.P. FFRDC 18 Other 14 N.P. | 71 Soc. 29 Psych. | 48 Univ. 20 N.P. 16 Univ. 12 Other | 89 Soc. 11 Psych. | 38 Univ. 35 Other 13 N.P. | 38 N.P. FFRDC 35 Univ. 12 N.P. |
| Social and Rehabilitation Service..... | 35.6 | — | — | 91 | 9 | 44 Univ. 25 N.P. 16 Other | — | — | 50 Soc. 40 Life 10 Psych. | 46 Univ. 25 N.P. 15 Other 11 For. | 26 N.P. 26 Univ. 24 Other 22 For. |

AGENCIES

| | | | | | | | | | | | |
|---|---------|----|----|-----|----|---|--|--|-----------------------------------|---|--|
| Department of Health, Education, and Welfare, total | 1,479.9 | 2 | 31 | 62 | 8 | 52 Univ. 20 Intra. 14 N.P. | 77 Life 8 Psych. | 55 Univ. 30 Intra. 9 N.P. | 10 Math. 8 Psych. | 52 Univ. 17 N.P. 16 Intra. | 39 Univ. 21 N.P. FFRDC 15 N.P. 10 Intra. 9 Ind. |
| Food and Drug Administration | 25.9 | — | — | 100 | — | 57 Intra. 30 Univ. 8 For. | — | — | 6 Life 38 Phy. Sci. | 57 Intra. 30 Univ. 8 For. | — |
| Health Services and Mental Health Administration | 227.7 | — | 29 | 54 | 17 | 38 Univ. 24 Intra. 17 N.P. 8 Other | 39 Life 30 Soc. 30 Psych. | 49 Univ. 28 Intra. 16 N.P. | 75 Life 13 Psych. 11 Soc. | 30 Univ. 24 Intra. 18 N.P. 14 Other 13 For. | 43 Univ. 21 Intra. 18 Ind. 17 N.P. |
| National Institutes of Health | 1,038.5 | — | 36 | 63 | 1 | 58 Univ. 20 Intra. 14 N.P. | 86 Life 8 Phy. Sci. | 56 Univ. 31 Intra. | 90 Life | 60 Univ. 18 N.P. 13 Intra. | 57 Univ. 25 Ind. 9 Intra. |
| Office of Child Development | 5.5 | — | — | 36 | 64 | 64 Univ. 31 N.P. | — | — | 50 Soc. 25 Life 25 Psych. | 95 Univ. | 43 N.P. 46 Univ. |
| Office of Education | 133.2 | — | 9 | 42 | 49 | 37 Univ. 20 N.P. FFRDC 18 Other 14 N.P. | 71 Soc. 29 Psych. | 48 Univ. 20 N.P. 16 Univ. FFRDC 12 Other | 89 Soc. 11 Psych. | 38 Univ. 35 Other 13 N.P. | 38 N.P. FFRDC 35 Univ. 12 N.P. |
| Social and Rehabilitation Service | 35.6 | — | — | 91 | 9 | 44 Univ. 25 N.P. 16 Other 12 For. | — | — | 50 Soc. 40 Life 10 Psych. | 46 Univ. 25 N.P. 15 Other 11 For. | 26 N.P. 26 Univ. 24 Other 22 For. |
| Social Security Administration | 13.5 | — | 3 | 97 | — | 96 Intra. | 100 Soc. | 100 Intra. | 100 Soc. | 96 Intra. | — |
| Department of Housing and Urban Development | 49.4 | 1 | — | 24 | 76 | 73 Ind. 12 Intra. 8 N.P. | — | — | 100 Eng. | 80 Ind. 15 N.P. | 71 Ind. 16 Intra. |
| Department of the Interior, total | 185.1 | 51 | 27 | 45 | 27 | 58 Intra. 20 Ind. 12 Univ. | 57 Environ. 20 Life 15 Phy. Sci. | 79 Intra. 10 Univ. 10 Other | 51 Eng. 23 Environ. 16 Life | 62 Intra. 20 Univ. 9 Ind. | 58 Ind. 31 Intra. |
| Bonneville Power Administration | 2.7 | — | — | 18 | 82 | 52 Intra. 34 Ind. | — | — | 80 Eng. 10 Environ. | 44 Ind. 29 Intra. 27 Univ. | 57 Intra. 32 Ind. 8 For. |
| Bureau of Land Management | .8 | — | — | 97 | 3 | 55 Intra. 40 Univ. | — | — | 92 Life 8 Soc. | 54 Intra. 41 Univ. | 100 Intra. |
| Bureau of Mines | 58.0 | — | 11 | 54 | 34 | 75 Intra. 19 Ind. | 62 Phy. Sci. 35 Eng. | 85 Intra. 15 Univ. | 80 Eng. 11 Phy. Sci. | 91 Intra. | 55 Ind. 45 Intra. |
| Bureau of Outdoor Recreation | .1 | — | — | 100 | — | 62 Intra. 38 Univ. | — | — | 100 Soc. | 62 Intra. 38 Univ. | — |

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)—Continued

| Agency and subdivision | Total R&D obligations (millions of dollars) | R&D obligations as percent of total agency budget ^a | Total research and development | | | | | Basic research | | Applied research | | Development |
|---|---|--|--|------------------|-------------|--|---|--|---|--|---|-------------|
| | | | Character of work (percent distribution) | | | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | Major performers ^b (percent of total) | | |
| | | | Basic research | Applied research | Development | | | | | | | |
| Bureau of Reclamation | 9.1 | — | (c) | 98 | 1 | 40 Univ. 38 Intra. 16 Ind. | 73 Eng. 27 Life | 55 Intra. 39 Univ. | 73 Environ. 26 Eng. | 40 Univ. 38 Intra. 16 Ind. | 100 Intra. | |
| Bureau of Sport Fisheries and Wildlife | 22.2 | — | 43 | 48 | 9 | 58 Intra. 40 Other | 100 Life | 52 Other 43 Intra. | 100 Life | 62 Intra. 37 Other | 100 Intra. | |
| Geological Survey | 43.2 | — | 70 | 30 | — | 96 Intra. | 91 Environ. | 99 Intra. | 70 Environ. 16 Phy. Sci. 11 Eng. | 90 Intra. | — | |
| Office of Coal Research | 12.4 | — | — | 39 | 61 | 45 Ind. 33 N.P. 20 Univ. | — | — | 100 Eng. | 41 Ind. 31 N.P. 26 Univ. | 48 Ind. 34 N.P. 16 Univ. | |
| Office of Saline Water | 23.4 | — | 7 | 15 | 79 | 68 Ind. 15 Intra. 10 Univ. | 100 Phy. Sci. | 99 Univ. | 100 Eng. | 56 Ind. 15 Univ. 12 Ind. FFRDC 12 N.P. | 76 Ind. 18 Intra. | |
| Office of the Secretary | .8 | — | — | 73 | 27 | 75 Ind. 19 Univ. | — | — | 100 Eng. | 69 Ind. 26 Univ. | 94 Ind. | |
| Office of Water Resources Research | 12.4 | — | 21 | 79 | — | 79 Univ. 8 Ind. | 38 Environ. 19 Eng. 18 Life 14 Soc. | 78 Univ. 8 Ind. | 46 Eng. 19 Life 15 Environ. 11 Soc. | 79 Univ. 8 Ind. | — | |
| Department of Justice, total | 10.1 | 1 | — | 62 | 38 | 32 Other 27 Ind. 19 Univ. 10 Intra. 9 N.P. | — | — | 46 Soc. 19 Psych. 13 Life 12 Phy. Sci. | 34 Other 29 Univ. 20 Ind. 8 N.P. | 39 Ind. 30 Other 19 Intra. 10 N.P. | |
| Bureau of Narcotics and Dangerous Drugs | 1.6 | — | — | 100 | — | 33 N.P. 27 Univ. 27 Ind. 10 N.P. | — | — | 50 Life 47 Soc. | 33 N.P. 27 Univ. 27 Ind. | — | |

| | | | | | | | | | | | |
|--|------|---|-----|-----|-----|---|--|---|---|---|---|
| Geological Survey..... | 43.2 | — | 70 | 30 | — | 96 Intra. | 91 Environ. | 99 Intra. | 70 Environ. 16 Phy. Sci. 11 Eng. | 90 Intra. | — |
| Office of Coal Research..... | 12.4 | — | — | 39 | 61 | 45 Ind. 33 N.P. 20 Univ. | — | — | 100 Eng. | 41 Ind. 31 N.P. 26 Univ. | 48 Ind. 34 N.P. 16 Univ. |
| Office of Saline Water..... | 23.4 | — | 7 | 15 | 79 | 68 Ind. 15 Intra. 10 Univ. | 100 Phy. Sci. | 99 Univ. | 100 Eng. | 56 Ind. 15 Univ. 12 Ind. FFRDC 12 N.P. | 76 Ind. 18 Intra. |
| Office of the Secretary..... | .8 | — | — | 73 | 27 | 75 Ind. 19 Univ. | — | — | 100 Eng. | 69 Ind. 26 Univ. | 94 Ind. |
| Office of Water Resources Research..... | 12.4 | — | 21 | 79 | — | 79 Univ. 8 Ind. | 38 Environ. 19 Eng. 18 Life 14 Soc. | 78 Univ. 8 Ind. | 46 Eng. 19 Life 15 Environ. 11 Soc. | 79 Univ. 8 Ind. | — |
| Department of Justice, total..... | 10.1 | 1 | — | 62 | 38 | 32 Other 27 Ind. 19 Univ. 10 Intra. 9 N.P. | — | — | 46 Soc. 19 Psych. 13 Life 12 Phy. Sci. | 34 Other 29 Univ. 20 Ind. 8 N.P. | 39 Ind. 30 Other 19 Intra. 10 N.P. |
| Bureau of Narcotics and Dangerous Drugs..... | 1.6 | — | — | 100 | — | 33 N.P. 27 Univ. 27 Ind. 10 N.P. FFRDC | — | — | 50 Life 47 Soc. | 33 N.P. 27 Univ. 27 Ind. 10 N.P. FFRDC | — |
| Bureau of Prisons..... | .2 | — | — | — | 100 | 70 Intra. 18 Other 10 N.P. | — | — | — | — | 70 Intra. 18 Other 10 N.P. |
| Federal Bureau of Investigation..... | .8 | — | — | — | 100 | 86 Ind. 14 Intra. | — | — | — | — | 86 Ind. 14 Intra. |
| Law Enforcement Assistance Administration..... | 7.5 | — | — | 62 | 38 | 43 Other 22 Ind. 20 Univ. 10 Intra. | — | — | 46 Soc. 25 Psych. 15 Phy. Sci. 8 Eng. | 46 Other 30 Univ. 18 Ind. | 9 Other 28 Ind. 16 Intra. 13 N.P. |
| Department of Labor, total..... | 24.5 | 1 | 11 | 41 | 49 | 44 Intra. 21 N.P. 18 Univ. 10 Other | 100 Soc. | 88 Intra. | 100 Soc. | 51 Intra. 18 N.P. 16 Univ. 9 Other | 29 Intra. 26 N.P. 23 Univ. 13 Other 9 Ind. |
| Bureau of Labor Statistics..... | 3.8 | — | 39 | 31 | 31 | 100 Intra. | 100 Soc. | 100 Intra. | 100 Soc. | 100 Intra. | 100 Intra. |
| Labor-Management Services Administration..... | .7 | — | 100 | — | — | 100 Intra. | 100 Soc. | 100 Intra. | — | — | — |
| Manpower Administration..... | 17.4 | — | 2 | 36 | 62 | 29 N.P. 25 Univ. 22 Intra. 14 Other 10 Ind. | 100 Soc. | 29 N.P. 25 Univ. 22 Intra. 14 Other 10 Ind. | 100 Soc. | 29 N.P. 25 Univ. 22 Intra. 14 Other 10 Ind. | 29 N.P. 25 Univ. 22 Intra. 14 Other 10 Ind. |
| Workplace Standards Administration..... | 2.6 | — | — | 100 | — | 100 Intra. | — | — | 100 Soc. | 100 Intra. | — |
| Postal Service..... | 45.1 | 2 | — | 12 | 88 | 82 Ind. 16 Intra. | — | — | 100 Other | 58 Ind. 30 Intra. | 85 Ind. 15 Intra. |

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)—Continued

| Agency and subdivision | Total R&D obligations (millions of dollars) | R&D obligations as percent of total agency budget ^a | Total research and development | | | | Basic research | | Applied research | | Development |
|---|---|--|--|------------------|-------------|--|---|---|---|--|--|
| | | | Character of work (percent distribution) | | | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | | |
| | | | Basic research | Applied research | Development | | | | | | |
| Department of State, total..... | 40.5 | 3 | — | 63 | 37 | 43 Univ. 28 N.P. 14 Intra. 13 For. | — | — | 74 Life 21 Soc. | 48 Univ. 23 N.P. 18 Intra. 10 For. | 38 N.P. 34 Univ. 19 For. 8 Intra. |
| Departmental Funds..... | .4 | — | — | 100 | — | 47 Other 31 Intra. 12 N.P. 10 Univ. | — | — | 100 Soc. | 47 Other 31 Intra. 12 N.P. 10 Univ. | — |
| Agency for International Development..... | 40.0 | — | — | 62 | 38 | 43 Univ. 28 N.P. 14 Intra. 13 For. | — | — | 75 Life 20 Soc. | 49 Univ. 23 N.P. 18 Intra. 10 For. | 38 N.P. 34 Univ. 19 For. 8 Intra. |
| Peace Corps..... | .1 | — | — | 100 | — | 58 Ind. 30 Intra. 12 N.P. | — | — | 100 Psych. | 58 Ind. 30 Intra. 12 N.P. | — |
| Department of Transportation, total..... | 436.7 | 6 | 5 | 21 | 75 | 71 Ind. 19 Intra. | 56 Environ. 38 Eng. | 61 Intra. 16 Other 10 Univ. 9 Ind. | 75 Eng. 12 Soc. | 36 Intra. 34 Ind. 16 Other 8 Univ. | 85 Ind. 12 Intra. |
| Federal Aviation Agency..... | 79.0 | — | — | 29 | 71 | 57 Intra. 37 Ind. | — | — | 85 Eng. | 82 Intra. 15 Ind. | 47 Ind. 46 Intra. |
| Federal Highway Administration..... | 32.3 | — | 20 | 65 | 15 | 64 Other 15 Intra. 11 Ind. | 95 Eng. | 52 Other 17 Intra. 12 Ind. 9 Univ. 9 N.P. | 95 Eng. | 65 Other 14 Ind. 13 Intra. 8 N.P. | 77 Other 23 Intra. |
| Federal Railroad Administration..... | 19.7 | — | — | 50 | 50 | 78 Ind. 12 Intra. | — | — | 61 Eng. 34 Soc. | 70 Ind. 19 Intra. | 86 Ind. |
| National Highway Traffic Safety Administration..... | 16.7 | — | 7 | 72 | 22 | 48 Ind. 18 Intra. 18 Univ. 14 N.P. | 100 Eng. | 100 Ind. | 65 Eng. 17 Psych. 10 Life | 28 Ind. 25 Intra. 25 Univ. 20 N.P. | 100 Ind. |
| Office of the Secretary..... | 249.1 | — | — | 6 | 94 | 97 Ind. | — | — | 64 Eng. 31 Soc. | 83 Ind. 14 Intra. | 98 Ind. |
| U. S. Coast Guard..... | 25.6 | — | 45 | 17 | 38 | 61 Intra. 35 Ind. | 100 Environ. | 100 Intra. | 60 Environ. 38 Eng. | 68 Intra. 20 Ind. 9 N.P. | 82 Ind. 12 Intra. |
| Urban Mass Transportation Administration..... | 14.3 | — | 11 | 31 | 58 | 43 Intra. 30 Univ. | 43 Soc. 43 Eng. | 100 Univ. | 62 Eng. 29 Soc. | 53 Univ. 17 Intra. | 65 Intra. 17 Ind. |

AGENCIES

| | | | | | | | | | | | |
|---|---------|-----|----|-----|----|---|---|--|---|---|--|
| Peace Corps..... | .1 | — | — | 100 | — | — | 58 Ind. 30 Intra. 12 N.P. | — | 100 Psych. | 58 Ind. 30 Intra. 12 N.P. | — |
| Department of Transportation, total..... | 436.7 | 6 | 5 | 21 | 75 | — | 71 Ind. 19 Intra. | 56 Environ. 38 Eng. | 61 Intra. 16 Other 10 Univ. 9 Ind. | 75 Eng. 12 Soc. | 85 Ind. 12 Intra. |
| Federal Aviation Agency..... | 79.0 | — | — | 29 | 71 | — | 57 Intra. 37 Ind. | — | — | 82 Intra. 15 Ind. | 47 Ind. 46 Intra. |
| Federal Highway Administration..... | 32.3 | — | 20 | 65 | 15 | — | 64 Other 15 Intra. 11 Ind. | 95 Eng. | 52 Other 17 Intra. 12 Ind. 9 Univ. 9 N.P. | 65 Other 14 Ind. 13 Intra. 8 N.P. | 77 Other 23 Intra. |
| Federal Railroad Administration..... | 19.7 | — | — | 50 | 50 | — | 78 Ind. 12 Intra. | — | — | 70 Ind. 19 Intra. | 86 Ind. |
| National Highway Traffic Safety Administration..... | 16.7 | — | 7 | 72 | 22 | — | 48 Ind. 18 Intra. 18 Univ. 14 N.P. | 100 Eng. | 100 Ind. | 65 Eng. 17 Psych. 10 Life | 100 Ind. |
| Office of the Secretary..... | 249.1 | — | — | 6 | 94 | — | 97 Ind. | — | — | 64 Eng. 31 Soc. | 98 Ind. |
| U. S. Coast Guard..... | 25.6 | — | 45 | 17 | 38 | — | 61 Intra. 35 Ind. | 100 Environ. | 100 Intra. | 68 Intra. 20 Ind. 9 N.P. | 82 Ind. 12 Intra. |
| Urban Mass Transportation Administration..... | 14.3 | — | 11 | 31 | 58 | — | 43 Intra. 30 Univ. 14 Ind. 11 N.P. | 49 Soc. 43 Eng. | 100 Univ. | 53 Univ. 17 Intra. 13 Ind. 12 N.P. | 65 Intra. 17 Ind. 12 N.P. |
| Department of the Treasury, total..... | .9 | (c) | — | 39 | 61 | — | 100 Intra. | — | — | 95 Phy. Sci. | 100 Intra. |
| Bureau of Engraving and Printing..... | .9 | — | — | 39 | 61 | — | 100 Intra. | — | — | 95 Phy. Sci. | 100 Intra. |
| Other agencies..... | | | | | | | | | | | |
| Advisory Commission on Intergovernmental Relations..... | .5 | (d) | — | 100 | — | — | 100 Intra. | — | — | 100 Soc. | — |
| Atomic Energy Commission..... | 1,306.6 | 51 | 21 | 11 | 68 | — | 36 Ind. FFRDC 33 Univ. 21 Ind. | 81 Phy. Sci. 13 Life | 61 Univ. FFRDC 27 Univ. 10 Ind. FFRDC | 49 Univ. FFRDC 26 Ind. FFRDC 11 Univ. | 45 Ind. FFRDC 30 Ind. 22 Univ. FFRDC |
| Civil Aeronautics Board..... | .3 | 1 | — | 100 | — | — | 100 Intra. | — | — | 100 Soc. | — |
| Civil Service Commission..... | .5 | (c) | 21 | 44 | 34 | — | 100 Intra. | 100 Psych. | 100 Intra. | 100 Psych. | 100 Intra. |
| Environmental Protection Agency..... | 116.2 | 8 | 5 | 48 | 47 | — | 38 Ind. 33 Intra. 15 Univ. | 47 Life 41 Phy. Sci. 10 Environ. | 76 Univ. 13 N.P. 10 For. | 43 Eng. 3 Life 13 Phy. Sci. 9 Environ. | 50 Ind. 33 Intra. |

Major characteristics of R&D obligations of Federal agencies, fiscal year 1971 (est.)—Continued

| Agency and subdivision | Total R&D obligations (millions of dollars) | R&D obligations as percent of total agency budget ^a | Total research and development | | | | Basic research | | Applied research | | Development |
|---|---|--|--|------------------|-------------|--|---|--|--|---|----------------------------------|
| | | | Character of work (percent distribution) | | | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | Major performers ^b (percent of total) | Major fields of science ^b (percent of total) | | |
| | | | Basic research | Applied research | Development | | | | | | |
| | | | | | | | | | | | |
| Federal Communications Commission | .6 | 2 | — | 100 | — | 100 Intra. | — | — | 100 Eng. | 100 Intra. | — |
| Federal Home Loan Bank Board | .4 | (^d) | — | 100 | — | 100 Intra. | — | — | 100 Soc. | 100 Intra. | — |
| Federal Trade Commission | .5 | 2 | — | 100 | — | 100 Intra. | — | — | 100 Soc. | 100 Intra. | — |
| General Services Administration | .3 | (^c) | — | 33 | 67 | 60 Other 29 Intra. | — | — | 76 Eng. 24 Other | 78 Intra. 22 N.P. | 89 Other |
| Library of Congress | 2.5 | (^d) | — | 40 | 60 | 100 Intra. | — | — | 100 Other | 100 Intra. | 100 Intra. |
| National Aeronautics and Space Administration | 3,247.7 | 92 | 19 | 26 | 55 | 63 Ind. 28 Intra. | 45 Phy. Sci. 30 Environ. 18 Eng. | 46 Ind. 32 Intra. 13 Univ. FFRDC 8 Univ. | 77 Eng. 15 Environ. | 53 Intra. 36 Ind. | 82 Ind. 14 Intra. |
| National Science Foundation | 345.0 | 70 | 83 | 12 | 5 | 75 Univ. 9 Univ. FFRDC | 28 Phy. Sci. 22 Environ. 21 Life 9 Eng. | 76 Univ. 11 Univ. FFRDC | 26 Soc. 19 Eng. 19 Environ. 15 Other 15 Soc. | 80 Univ. | 43 N.P. 39 Univ. 17 Intra. |
| Office of Economic Opportunity | 115.6 | 6 | 2 | 32 | 66 | 62 N.P. 19 Univ. 11 Ind. | 100 Soc. | 60 Univ. 40 Intra. | 68 Soc. 19 Life 14 Psych. | 36 Univ. 29 Ind. 20 N.P. 14 Intra. | 85 N.P. 10 Univ. |
| Office of Emergency Preparedness | 1.0 | (^d) | — | 100 | — | 67 Intra. 25 Ind. 8 N.P. | — | — | 50 Eng. 50 Other | 67 Intra. 25 Ind. 8 N.P. | — |
| Office of Science and Technology | 2.0 | 100 | 20 | 30 | 50 | 100 Intra. | 31 Life 30 Eng. 26 Phy. Sci. 9 Environ. | 100 Intra. | 31 Life 30 Eng. 26 Phy. Sci. 9 Environ. | 100 Intra. | 100 Intra. |
| Smithsonian Institution | 20.3 | 40 | 100 | — | — | 93 Intra. | 42 Life 37 Soc. 17 Phy. Sci. | 93 Intra. | — | — | — |
| Tennessee Valley Authority | 9.3 | 2 | — | 80 | 20 | 98 Intra. | — | — | 55 Eng. | 98 Intra. | 100 Intra. |

| | | | | | | | | | | | |
|--|---------|-----|-----|-----|----|---------------------------------|--|--|--|---|---|
| National Aeronautics and Space Administration..... | 3,247.7 | 92 | 19 | 26 | 55 | 63 Ind. 28 Intra. | 45 Phy. Sci. 30 Environ. 18 Eng. | 46 Ind. 32 Intra. 13 Univ. FFRDC 8 Univ. | 77 Eng. 15 Environ. | 53 Intra. 36 Ind. | 82 Ind. 14 Intra. |
| National Science Foundation..... | 345.0 | 70 | 83 | 12 | 5 | 75 Univ. 9 Univ. FFRDC | 28 Phy. Sci. 22 Environ. 21 Life 9 Eng. | 76 Univ. 11 Univ. FFRDC | 26 Soc. 19 Eng. 19 Environ. 15 Other 15 Soc. | 80 Univ. | 43 N.P. 39 Univ. 17 Intra. |
| Office of Economic Opportunity..... | 115.6 | 6 | 2 | 32 | 66 | 62 N.P. 19 Univ. 11 Ind. | 100 Soc. | 60 Univ. 40 Intra. | 68 Soc. 13 Life 14 Psych. | 36 Univ. 29 Ind. 20 N.P. 14 Intra. | 85 N.P. 10 Univ. |
| Office of Emergency Preparedness..... | 1.0 | (4) | — | 100 | — | 67 Intra. 25 Ind. 8 N.P. | — | — | 50 Eng. 50 Other | 67 Intra. 25 Ind. 8 N.P. | — |
| Office of Science and Technology..... | 2.0 | 100 | 20 | 30 | 50 | 100 Intra. | 31 Life 30 Eng. 26 Phy. Sci. 9 Environ. | 100 Intra. | 31 Life 30 Eng. 26 Phy. Sci. 9 Environ. | 100 Intra. | 100 Intra. |
| Smithsonian Institution..... | 20.3 | 40 | 100 | — | — | 93 Intra. | 42 Life 37 Soc. 17 Phy. Sci. | 93 Intra. | — | — | — |
| Tennessee Valley Authority..... | 9.3 | 2 | — | 80 | 20 | 98 Intra. | — | — | 55 Eng. 26 Life 13 Phy. Sci. | 98 Intra. | 100 Intra. |
| U. S. Arms Control and Disarmament Agency..... | 3.1 | 34 | — | 76 | 24 | 65 Intra. 15 Ind. 13 N.P. | — | — | 56 Eng. 25 Soc. 10 Phy. Sci. | 57 Intra. 17 Ind. 17 N.P. | 90 Intra. 10 Ind. |
| U. S. Information Agency..... | 2 | (5) | — | 86 | 14 | 68 Intra. 32 Ind. | — | — | 100 Eng. | 63 Intra. 38 Ind. | 100 Intra. |
| Veterans Administration..... | 61.6 | 1 | 9 | 90 | 1 | 97 Intra. | 84 Life 11 Psych. | 98 Intra. | 91 Life | 98 Intra. | 32 Ind. 30 Intra. 28 Univ. 10 N.P. |

a Total agency budgets are derived from table 8, "Obligations Incurred, Net" of The Budget, FY 1972, page 528.
b "Major" is here defined as any performer or field of science which singly accounts for at least 8 percent of total funds.
c Less than 0.5 percent.
d Comparable data for total agency budget not available.

NOTE: Intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

ABBREVIATIONS

Performers

Intra.—Intramural.
Ind.—Industrial firms excluding Federally Funded Research and Development Centers (FFRDC's).
Univ.—Universities and colleges excluding FFRDC's.
N.P.—Other nonprofit institutions excluding FFRDC's.
For.—Foreign.

Field of Sciences

Life—Life sciences.
Psych.—Psychology.
Phy. Sci.—Physical sciences.
Eng.—Engineering.
Math.—Mathematics.
Soc.—Social sciences.
Environ.—Environmental sciences.

SECTION 7. r&d plant

The rapid advances of science have been possible because of the availability of large-scale research facilities and complex equipment and instruments. Support for R&D plant is, therefore, a corollary of support for research and development and is necessary for the continued progress of science.

R&D plant includes both land and capital goods used in research and development. Fixed equipment such as radio telescopes, nuclear reactors, and research vessels are also R&D plant, but expendable items like rocket fuel, experimental rockets, and common laboratory supplies are not.

R&D plant covers acquisition, construction, and repair, but not operational costs.

R&D plant data reported here tend to be understated because of the difficulty some agencies, such as DOD and NASA, have in reporting this information. (See technical notes, p. 68.)

THE CURRENT PERIOD

The following agencies provided the largest amount of R&D plant support during the 1969-72 period:

Federal obligations for R&D plant, by agency
(Dollars in millions)

| Agency | Actual | | Estimates | |
|--|--------------|--------------|--------------|--------------|
| | 1969 | 1970 | 1971 | 1972 |
| Total..... | \$669 | \$524 | \$659 | \$588 |
| Atomic Energy Commission..... | 303 | 266 | 353 | 243 |
| Department of Defense..... | 194 | 141 | 162 | 160 |
| National Aeronautics and Space Administration..... | 55 | 33 | 25 | 56 |
| Department of Health, Education, and Welfare..... | 53 | 31 | 24 | 23 |
| National Science Foundation..... | 27 | 23 | 22 | 19 |
| Department of Transportation..... | 6 | 5 | 19 | 43 |
| Other agencies..... | 31 | 25 | 54 | 44 |

- Since 1967 total R&D plant funding has fluctuated between \$500 million and \$700 million.
- The \$524 million obligated in 1970 was the lowest figure for R&D plant since 1959.
- Support by most agencies for R&D plant is declining or leveling off. The chief exception is DOT, whose facility programs are scheduled to increase substantially, primarily through construction on the part of the Federal Railroad Administration at its High-Speed Ground Test Center in Pueblo, Colo.
- For AEC the drop in R&D plant obligations in 1970 resulted from delays in initiation of construction and slippages in scheduling of ongoing projects, primarily in the reactor development, weapons, and physical research programs. The estimated increase in 1971 was largely compensation for the 1970 delays.
- For DOD the drop in R&D plant support in FY 1970 was largely due to a reduction in Air Force construction activity. The Air Force, how-

R&D PLANT

THE CURRENT PERIOD

The following agencies provided the largest amount of R&D plant support during the 1969-72 period:

Federal obligations for R&D plant, by agency
[Dollars in millions]

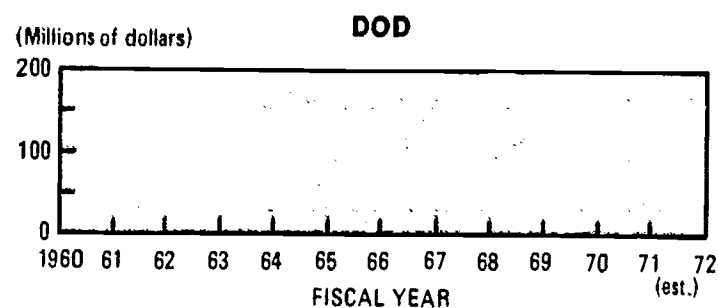
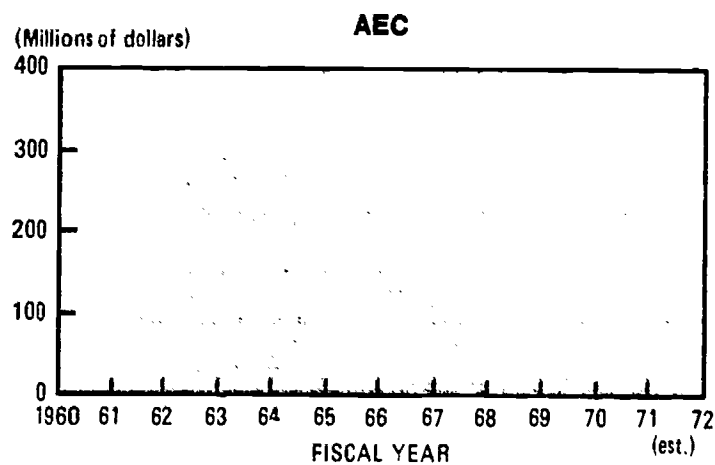
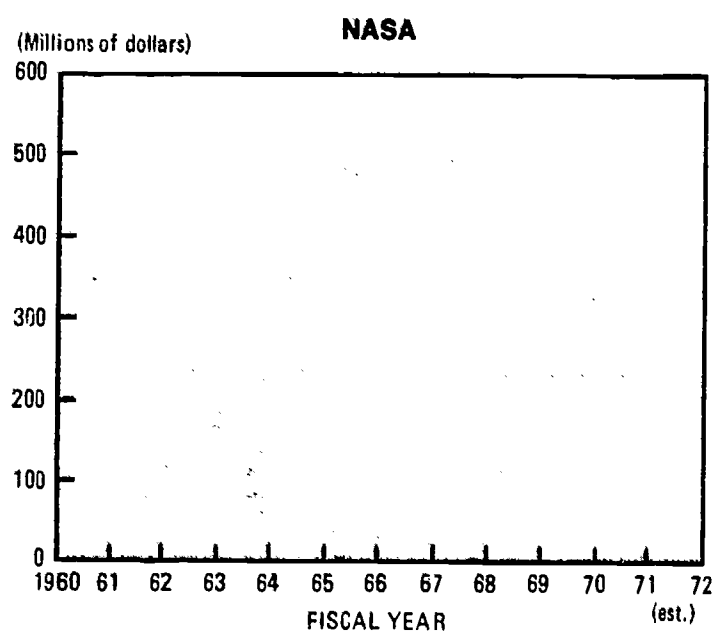
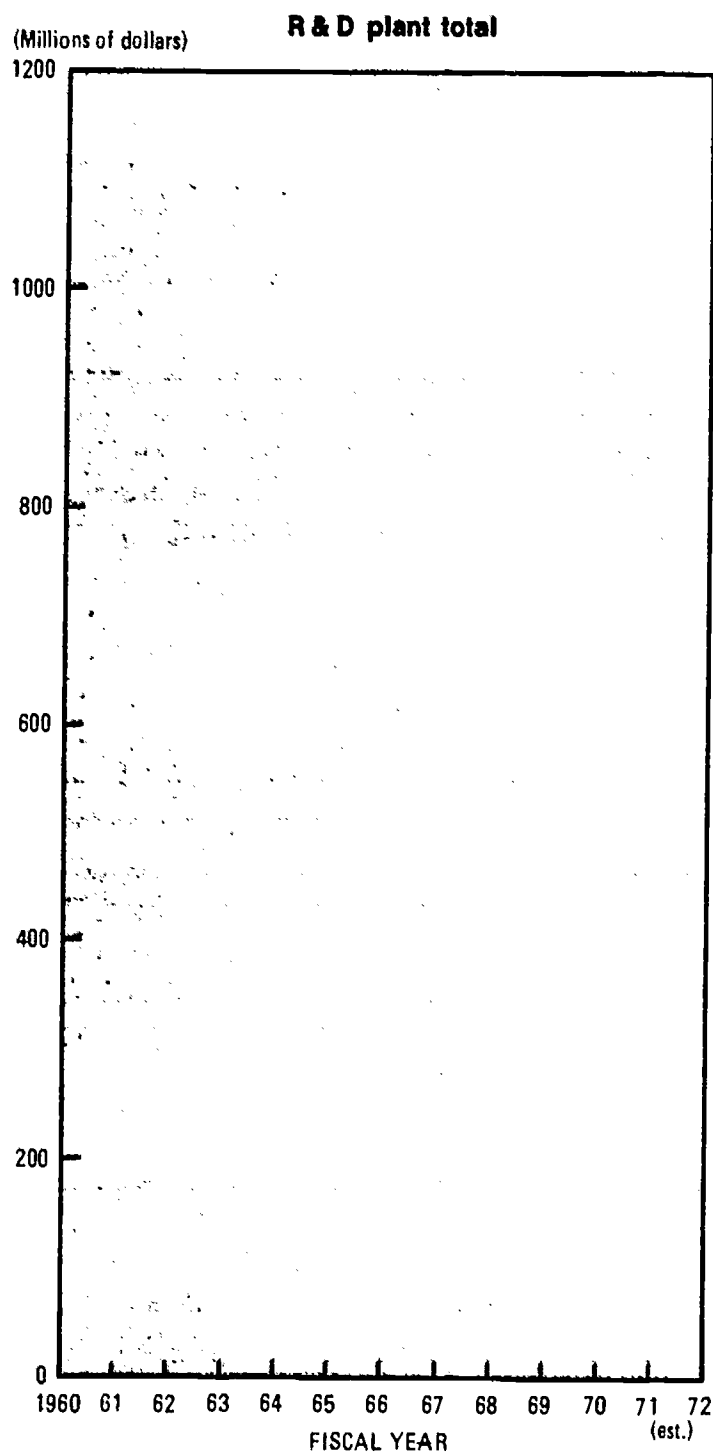
| Agency | Actual | | Estimates | |
|--|--------------|--------------|--------------|--------------|
| | 1969 | 1970 | 1971 | 1972 |
| Total | \$669 | \$524 | \$659 | \$588 |
| Atomic Energy Commission..... | 303 | 266 | 353 | 243 |
| Department of Defense..... | 194 | 141 | 162 | 160 |
| National Aeronautics and Space Administration..... | 55 | 33 | 25 | 56 |
| Department of Health, Education, and Welfare..... | 53 | 31 | 24 | 23 |
| National Science Foundation..... | 27 | 23 | 22 | 19 |
| Department of Transportation..... | 6 | 5 | 19 | 43 |
| Other agencies..... | 31 | 25 | 54 | 44 |

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- For DOD the drop in R&D plant support in FY 1970 was largely due to a reduction in Air Force construction activity. The Air Force, how-

ever, remains the primary supporter of R&D facilities among all DOD subdivisions throughout the current period.

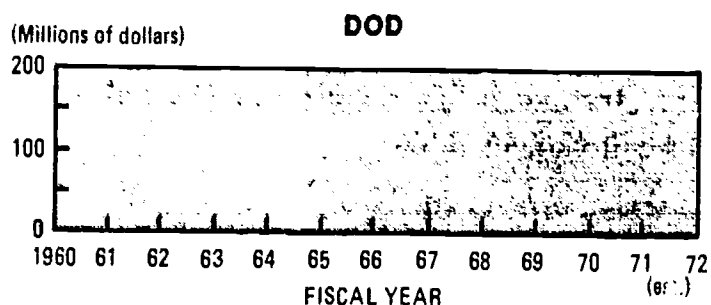
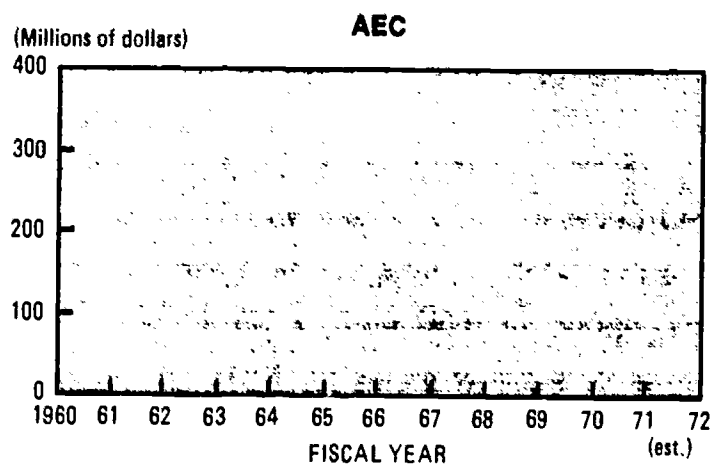
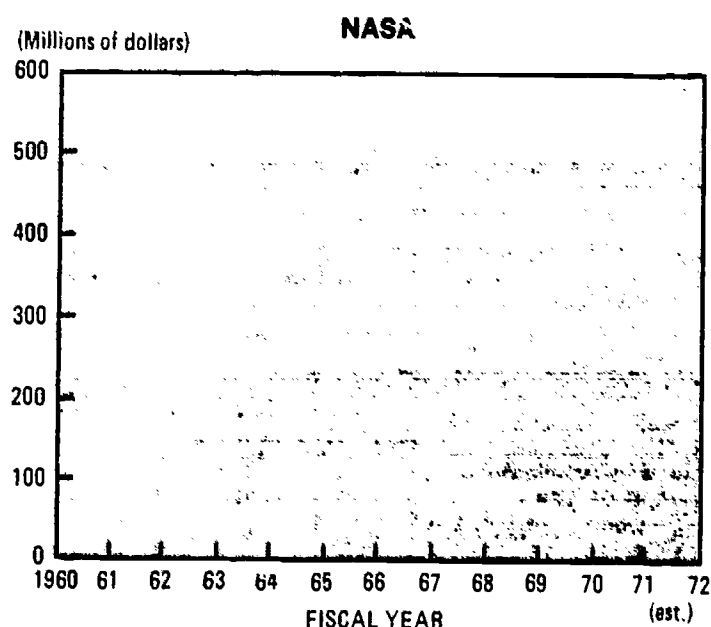
- NASA's R&D plant funding is now at a relatively modest level, compared to the mid-1960's. Current funds provide for modification and provision of facilities for space shuttle technology, modifications to the Titan III launch area, and supporting activities. The last include essential rehabilitation of and modifications to facilities at NASA installations and at Government-owned plants operated by NASA contractors.
- The drop in HEW obligations in the current period is largely the result of the completion in 1970 of Office of Education construction activity for R&D centers and educational laboratories. Most of the remaining HEW program represents NIH support for the construction of research facilities at universities or for its own intramural work.
- The NSF level of R&D plant support continues to drop, mostly because of the overall decrease in funding for institutional support, which includes facilities.

Trends in Federal obligations for R&D plant, by agency



SOURCE: National Science Foundation

, by agency



TRENDS

- The R&D plant constructed in any given year supports R&D performance over a number of years. Thus, peaks and valleys in R&D plant funding are not closely indicative of the level of the R&D effort of the same period.
- Throughout the 1960–72 timespan, with few exceptions, three agencies have been the major sources of R&D plant funds—AEC, DOD, and NASA; their combined totals have ranged from 68 to 87 percent of the Federal R&D plant total.
- Since 1963, when R&D plant obligations were at their highest point, obligations have dropped 44 percent (based on 1971). Almost all the R&D plant support agencies have contributed to the decline.
- However, during the 1960's the broad trends in R&D plant obligations—the rise and subsequent decrease—mainly reflected the impact of one agency, NASA. The total of \$1,168 million in 1963 included NASA obligations of \$577 million, almost as much as all other agencies combined. NASA's R&D plant obligations by then had risen to 5 times their 1960 level, but they declined rapidly after the mid-1960's. The other agencies together maintained a \$400 million to \$600 million level throughout the decade.

- Since 1960, AEC's R&D plant obligations have been at the \$200 million to \$300 million level in most years. The high for this agency is represented by the \$353 million estimate for 1971. AEC's R&D plant funds have been used primarily for the construction of national research centers, such as the Argonne and Brookhaven National Laboratories, and for facilities and capital equipment for the Reactor Development, Physical Research, Weapons Research, and Special Nuclear Materials programs. Recently, AEC has initiated such major efforts as the Fast Flux Testing Facility near Richland, Wash., and the 200-BeV Accelerator at Weston, Ill.

- Most of the R&D plant obligations of DOD have been used for activities connected with missile and rocket programs. These include the construction of a continental air defense network and the establishment of facilities to test missile, propulsion, and electronics systems.

- The sharp rise and drop in NASA's R&D plant obligations in the 1960's chiefly reflect the requirements of the manned lunar landing program. From a level above \$500 million between 1963 and 1965, NASA's funding for R&D plant has dropped to the \$25 million estimated for 1971. Planned facilities include those for launching space vehicles; simulating a space environment; testing, tracking, and data acquisition; and control and guidance.

TYPE OF PERFORMER SUPPORTED

A measure of R&D plant purposes can be shown in terms of type of performer supported.

Federal obligations for R&D plant, by type of performer supported

(Dollars in millions)

| Type of performer supported | Actual | | Estimates | |
|---|----------------------|-------|-----------|-------|
| | 1969 | 1970 | 1971 | 1972 |
| Total..... | \$669 | \$524 | \$659 | \$588 |
| | Percent distribution | | | |
| Federal intramural..... | 39 | 32 | 36 | 49 |
| Industrial firms..... | 8 | 8 | 11 | 9 |
| FFRDC's administered by industrial firms..... | 13 | 12 | 19 | 13 |
| Universities and colleges..... | 9 | 11 | 7 | 6 |
| FFRDC's administered by universities..... | 26 | 32 | 27 | 23 |
| Other nonprofit institutions..... | 1 | 1 | 1 | 1 |
| FFRDC's administered by other nonprofit institutions..... | 3 | 5 | (*) | (*) |
| Other domestic performers..... | (*) | (*) | (*) | (*) |

* Less than 0.5 percent.

- From 1969 to 1972 the two major types of performers supported by R&D plant construction—intramural performers and FFRDC's administered by universities—reflect different trends in their share of the R&D plant total.
- R&D plant funds supporting Federal intramural performance are scheduled to rise substantially between 1970 and 1972 in their share of the total whereas R&D plant funds for performance by university-administered FFRDC's are expected to drop in their share of the total. By 1972 the first sector is expected to make up about one-half the total and the second, about one-fourth. R&D plant support to industry-administered FFRDC's is scheduled to be about one-eighth of the total.

R&D PLANT

TYPE OF PERFORMER SUPPORTED

A measure of R&D plant purposes can be shown in terms of type of performer supported.

Federal obligations for R&D plant, by type of performer supported

(Dollars in millions)

| Type of performer supported | Actual | | Estimates | |
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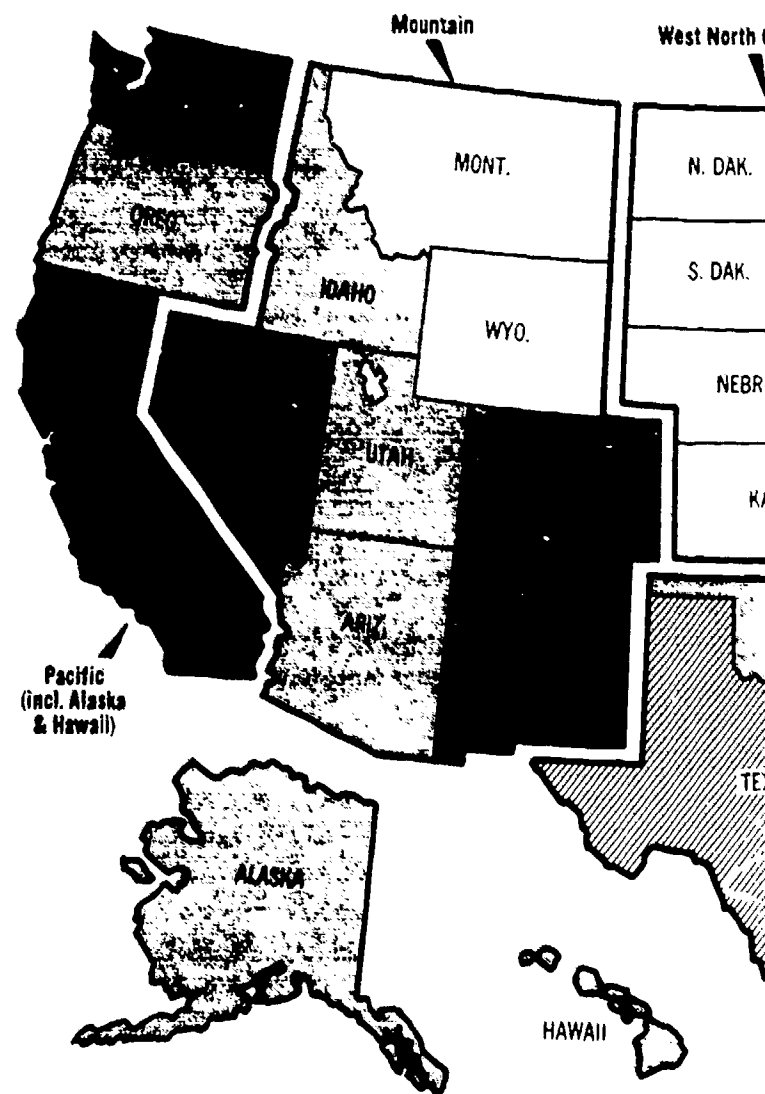
- DOD remains the largest agency provider of R&D plant funds for intramural research and development, but NASA and DOT are the agencies responsible for most of the scheduled increase in 1972.

- AEC provided virtually all of the R&D plant funds for work performed by university-administered FFRDC's. Funds were to be used for such installations as the National Accelerator Laboratory near Chicago, Ill., the Los Alamos Scientific Laboratory in Los Alamos, N. Mex., and the Lawrence Radiation Laboratory in Livermore, Calif.

- AEC also provided all of the R&D plant funds used to support work performed by industry-administered FFRDC's. Included in this category are the Pacific Northwest Laboratory in Richland, Wash. and the Sandia Laboratories in Albuquerque, N. Mex. and Livermore, Calif.

(For detailed data on this section see appendix tables C-70 through C-73, C-94, and C-97.)

Distribution of total Federal R&D obligations



SOURCE: National Science Foundation

SECTION 8.

geographic distribution

Early surveys on the distribution of Federal R&D obligations to States were conducted intermittently.

The first ones covered 1963 and 1965. Later

surveys were conducted on an annual basis, beginning with the year 1968. The current one, covering 1970, is the fifth survey of this kind. All

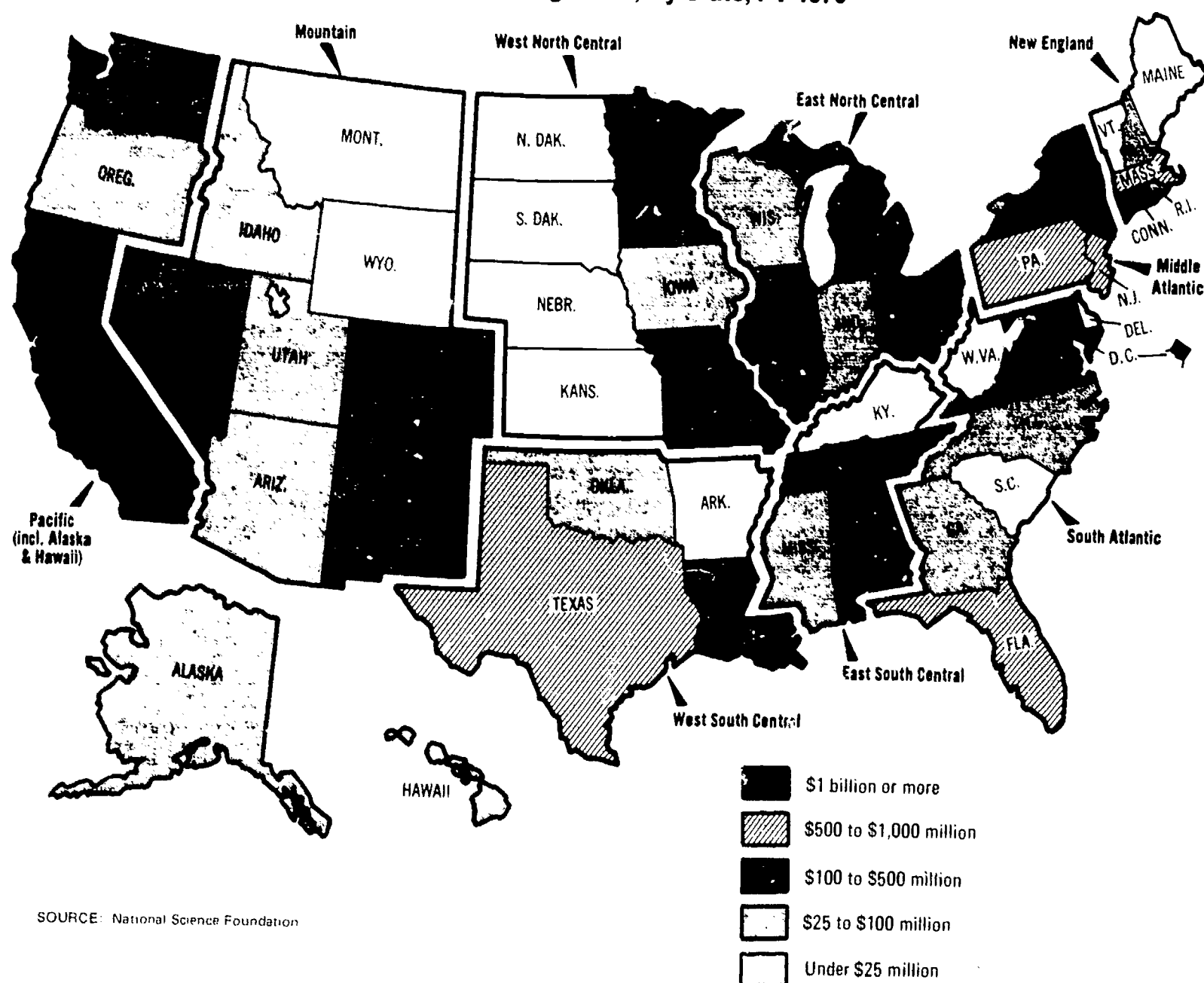
of the surveys have been based on reports by agencies whose combined obligations represented almost all of the total Federal R&D dollars.

The 10 respondents for 1970 had total obligations of \$15.0 billion, or 98 percent of total agency R&D obligations for that year. Their R&D plant obligations were \$520 million.

Data are given on a prime contract basis, although a sample survey was made of the effects of first-tier subcontracting in 1970. Indications are that dispersion of funds is actually greater than the pattern shown here if subcontracting is taken into account, as discussed later in the section.

- In 1970, for the first time, as many as three States received more than \$1 billion each in Federal R&D support. They were California, New York, and Maryland.
- However, the California total was almost \$3.9 billion, more than three times the amount received by the next State, New York.
- Five States fell in the \$500 million-to-\$1 billion category: Florida, Massachusetts, New Jersey, Texas, and Pennsylvania.

Distribution of total Federal R&D obligations, by State, FY 1970



- In 1970, for the first time, as many as three States received more than \$1 billion each in Federal R&D support. They were California, New York, and Maryland.
- However, the California total was almost \$3.9 billion, more than three times the amount received by the next State, New York.
- Five States fell in the \$500 million-to-\$1 billion category: Florida, Massachusetts, New Jersey, Texas, and Pennsylvania.

- Fifteen States (including the District of Columbia) were found in the \$100 million-to-\$500 million group, and this group was widely distributed throughout the country.
- Fifteen States received from \$25 million to \$100 million in support.
- Thirteen States received less than \$25 million.

DISTRIBUTION BY DIVISION

In the 1963-70 period the distribution of Federal R&D obligations among national divisions has changed as follows:

Distribution of Federal R&D obligations by geographic division, fiscal years 1963, 1965, 1968, 1969, and 1970

| Division | 1963 | 1965 | 1968 | 1969 | 1970 |
|-----------------------------|----------------------|----------|----------|----------|----------|
| Total (millions of dollars) | \$12,251 | \$14,357 | \$15,690 | \$15,355 | \$14,981 |
| | Percent distribution | | | | |
| Pacific | 38.1 | 33.8 | 30.4 | 31.3 | 29.4 |
| South Atlantic | 13.8 | 15.0 | 18.0 | 19.3 | 19.4 |
| Middle Atlantic | 14.6 | 15.5 | 15.7 | 15.9 | 16.8 |
| Mountain | 8.7 | 6.9 | 7.0 | 7.4 | 7.6 |
| East North Central | 6.7 | 6.4 | 8.2 | 6.8 | 6.9 |
| New England | 5.7 | 6.9 | 6.4 | 7.1 | 6.7 |
| West South Central | 5.0 | 8.0 | 7.6 | 5.8 | 5.6 |
| East South Central | 3.4 | 4.4 | 4.2 | 3.9 | 4.0 |
| West North Central | 3.1 | 2.8 | 2.0 | 2.1 | 3.2 |

NOTE: Percents do not add to 100 because outlying areas have been excluded.

- From 1969 to 1970 six divisions grew in their share of the total, and three declined.
- The only significant gains were registered by the Middle Atlantic division, which has shown steady growth in its share since 1963, and the West North Central division, which had previously been declining.
- The greatest decline from 1969 to 1970 was shown by the Pacific division. However, this division remained the largest recipient of Federal R&D funds by a wide margin.
- Over the longer span, from 1963 to 1970, the Pacific division registered the greatest decline in share of the R&D total. The largest increase by far, both in share and in dollars, was reflected by the South Atlantic division. The second largest dollar gain was made by the Middle Atlantic division and the third largest dollar gain, by the New England division. Their shares of the R&D total increased accordingly.

- The divisions showing the greatest relative increases from 1963 to 1970 were the South Atlantic, the East South Central, the New England and the Middle Atlantic. The only division to reflect a loss from 1963 to 1970 was the Pacific division.

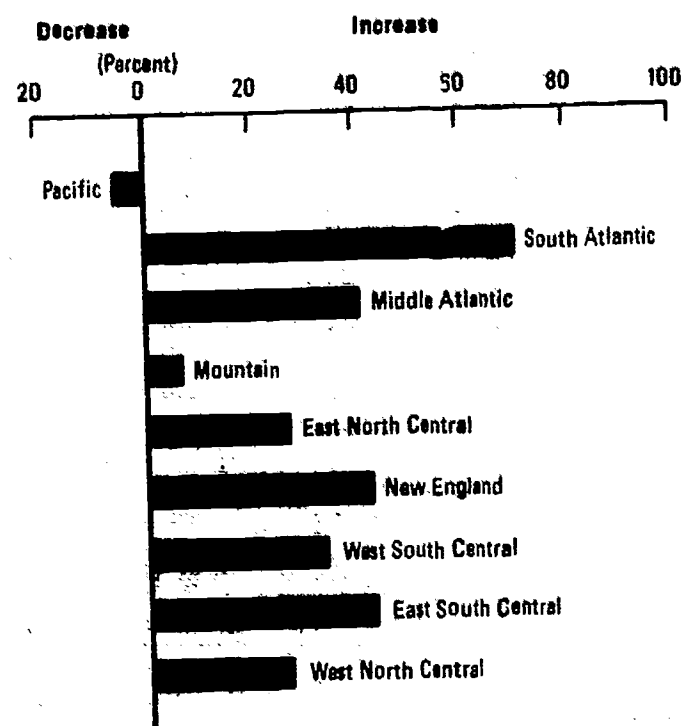
STATES WITHIN DIVISIONS

Important changes by States in 1970 and their effects on the divisions are shown below:

Pacific

- The relatively large decrease in Federal support to the Pacific division from 1969 to 1970 was the net result of losses to three States that were not offset by the gains of the other two. California's decrease of \$419 million was by

Change in Federal R&D funding support to geographic divisions, FY 1963-1970



SOURCE: National Science Foundation

GEOGRAPHIC DISTRIBUTION

- The divisions showing the greatest relative increases from 1963 to 1970 were the South Atlantic, the East South Central, the New England and the Middle Atlantic. The only division to reflect a loss from 1963 to 1970 was the Pacific division.

far the greatest factor and resulted almost entirely from cutbacks in DOD and NASA programs.

- The chief gain was shown by Washington. In 1970 DOT funding for the supersonic aircraft more than offset a DOD funding decrease, largely on the part of the Air Force.

STATES WITHIN DIVISIONS

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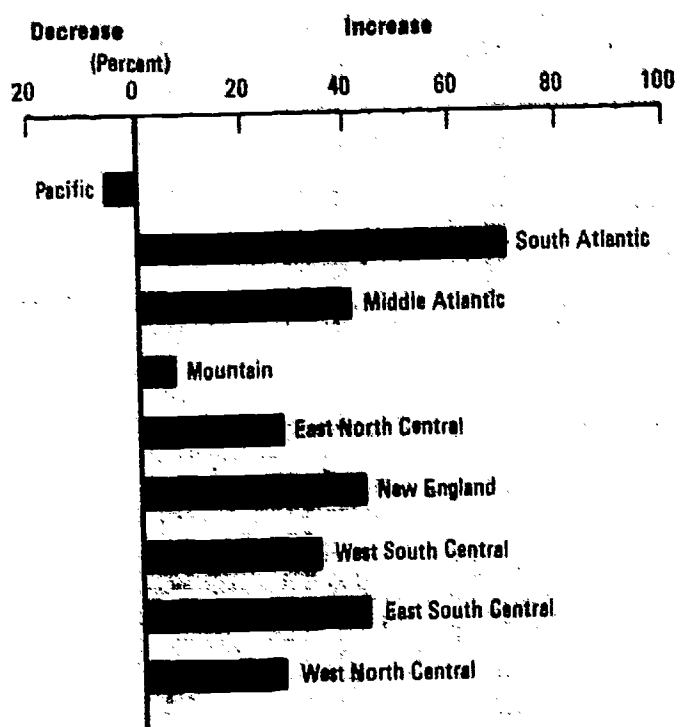
South Atlantic

- This division's net dollar decline from 1969 to 1970 was almost all a reflection of the drop of \$205 million in Federal R&D support to Georgia, which was second only to California in dollar loss in 1970. The only other State in this division to show a decrease was Florida.
- Georgia's decrease was based on a decline in industrial work on the C-5A aircraft for the Air Force.
- On the other hand, Maryland's \$102 million increase was surpassed by only two other States in 1970 (Missouri and New York). Almost all the reporting agencies expanded their support, especially DOD, NASA, and HEW.
- Virginia gained mainly through further funding on the part of DOD and NASA; both agencies concentrated on the intramural sector.

Middle Atlantic

- Increased support to New York and New Jersey more than offset Pennsylvania's rather substantial loss in 1970. The New York increase of \$129 million largely represented additional industrial performance of R&D work on the Navy's F-14A fleet air defense fighter-interceptor.
- The drop in support to Pennsylvania (third largest drop among all States in 1970) came about mostly because of reduced DOD and NASA contracting to industry.

Change in Federal R&D funding support to geographic divisions, FY 1963-1970



SOURCE: National Science Foundation

R&D obligations by geographic division and State, fiscal years 1963, 1965, 1968, 1969, and 1970
[Dollars in millions]

| Division and State | 1963 | 1965 | 1968 | 1969 | Net increase/ decrease 1963-69 | 1970 | Net increase/ decrease 1969-70 |
|---------------------------------|------------------|------------------|------------------|------------------|---|------------------|---|
| Pacific | \$4,665.2 | \$4,849.0 | \$4,774.3 | \$4,813.5 | +\$ 148.3 | \$4,404.1 | -\$409.4 |
| Alaska..... | 12.1 | 14.4 | 61.8 | 68.6 | +56.5 | 43.2 | -25.4 |
| California..... | 4,296.7 | 4,553.3 | 4,298.6 | 4,289.8 | -6.9 | 3,871.1 | -418.7 |
| Hawaii..... | 7.1 | 41.5 | 35.0 | 37.7 | +30.6 | 43.8 | +6.1 |
| Oregon..... | 18.2 | 25.6 | 35.0 | 36.1 | +17.9 | 33.8 | -2.3 |
| Washington..... | 331.1 | 214.3 | 343.9 | 381.2 | +50.1 | 412.2 | +31.0 |
| South Atlantic | \$1,685.3 | \$2,154.9 | \$2,819.7 | \$2,961.3 | +\$1,276.0 | \$2,899.2 | -\$ 62.1 |
| Delaware..... | 24.6 | 7.1 | 13.9 | 16.1 | -8.5 | 16.3 | +2.2 |
| District of Columbia..... | 403.9 | 374.3 | 443.2 | 444.3 | +40.4 | 468.5 | +24.2 |
| Florida..... | 340.9 | 459.8 | 799.1 | 884.5 | +543.6 | 824.8 | -59.7 |
| Georgia..... | 26.7 | 58.4 | 280.7 | 276.8 | +250.1 | 72.3 | -204.5 |
| Maryland..... | 675.7 | 876.6 | 905.9 | 961.8 | +286.1 | 1,063.4 | +101.6 |
| North Carolina..... | 27.0 | 57.8 | 62.4 | 58.5 | +31.5 | 63.9 | +5.4 |
| South Carolina..... | 19.8 | 17.1 | 18.7 | 17.1 | -2.7 | 17.8 | +0.7 |
| Virginia..... | 158.8 | 284.2 | 275.2 | 286.3 | +127.5 | 352.7 | +66.4 |
| West Virginia..... | 7.9 | 19.6 | 20.6 | 16.0 | +8.1 | 19.6 | +3.6 |
| Middle Atlantic | \$1,789.2 | \$2,228.6 | \$2,473.4 | \$2,436.1 | +\$ 646.9 | \$2,516.9 | +\$ 80.8 |
| New Jersey..... | 410.1 | 410.7 | 681.8 | 708.9 | +298.8 | 742.5 | +33.6 |
| New York..... | 944.2 | 1,289.3 | 1,174.9 | 1,107.0 | +162.8 | 1,235.6 | +128.6 |
| Pennsylvania..... | 434.9 | 528.7 | 616.7 | 620.3 | +185.4 | 538.8 | -81.5 |
| Mountain | \$1,068.6 | \$ 990.1 | \$1,093.6 | \$1,136.7 | +\$ 68.1 | \$1,136.8 | +\$.1 |
| Arizona..... | 174.6 | 76.6 | 71.4 | 79.2 | -95.4 | 72.8 | -6.4 |
| Colorado..... | 240.8 | 212.3 | 265.3 | 264.4 | +23.6 | 274.1 | +9.7 |
| Idaho..... | 29.7 | 63.6 | 65.6 | 69.6 | +39.9 | 75.0 | +5.4 |
| Montana..... | 8.5 | 8.6 | 8.3 | 8.3 | -2 | 11.6 | +3.3 |
| Nevada..... | 128.9 | 154.5 | 223.6 | 232.3 | +103.4 | 190.9 | -41.4 |
| New Mexico..... | 345.9 | 425.3 | 413.3 | 426.3 | +80.4 | 444.1 | +17.8 |
| Utah..... | 135.8 | 45.0 | 39.7 | 49.8 | -86.0 | 61.1 | +11.3 |
| Wyoming..... | 4.5 | 4.2 | 6.4 | 6.8 | +2.3 | 7.2 | +0.4 |
| East North Central | \$ 819.5 | \$ 923.7 | \$1,294.0 | \$1,044.3 | +\$ 224.8 | \$1,038.8 | -\$ 5.5 |
| Illinois..... | 203.9 | 191.7 | 239.3 | 251.2 | +47.3 | 239.6 | -11.6 |
| Indiana..... | 57.3 | 71.9 | 82.9 | 108.8 | +51.5 | 91.9 | -16.9 |
| Michigan..... | 154.4 | 155.2 | 203.4 | 167.4 | +13.0 | 162.8 | -4.6 |
| Ohio..... | 304.3 | 379.1 | 353.6 | 432.6 | +128.3 | 457.3 | +24.7 |
| Wisconsin..... | 99.7 | 125.8 | 114.8 | 84.2 | -15.5 | 87.1 | +2.9 |
| New England | \$ 702.2 | \$ 992.7 | \$1,009.4 | \$1,085.7 | +\$ 383.5 | \$1,000.8 | -\$ 84.9 |
| Connecticut..... | 139.3 | 184.5 | 133.2 | 223.6 | +84.3 | 160.0 | -63.6 |
| Maine..... | 5.3 | 4.3 | 6.0 | 14.3 | +9.0 | 13.3 | -1.0 |
| Massachusetts..... | 515.1 | 733.7 | 795.7 | 775.0 | +259.9 | 760.9 | -14.1 |
| New Hampshire..... | 16.9 | 28.8 | 36.6 | 31.0 | +14.1 | 27.3 | -3.7 |
| Rhode Island..... | 20.5 | 37.5 | 31.1 | 32.8 | +12.3 | 29.9 | -2.9 |
| Vermont..... | 5.2 | 4.0 | 6.8 | 9.0 | +3.8 | 9.5 | +0.5 |
| West South Central | \$ 608.2 | \$1,143.1 | \$1,188.9 | \$ 894.3 | +\$ 286.1 | \$ 834.9 | -\$ 59.4 |
| Arkansas..... | 4.2 | 6.6 | 8.1 | 7.4 | +3.2 | 9.8 | +2.4 |
| Louisiana..... | 189.2 | 377.1 | 272.4 | 171.8 | -17.4 | 146.5 | -25.3 |
| Oklahoma..... | 16.9 | 28.4 | 24.0 | 20.1 | +3.2 | 29.5 | +9.4 |
| Texas..... | 397.9 | 731.0 | 884.4 | 695.0 | +297.1 | 649.1 | -45.9 |
| East South Central | \$ 420.1 | \$ 628.3 | \$ 635.3 | \$ 597.5 | +\$ 177.4 | \$ 599.7 | +\$ 2.2 |
| Alabama..... | 246.8 | 370.7 | 405.7 | 358.4 | +111.6 | 357.2 | -1.2 |
| Kentucky..... | 11.0 | 17.1 | 24.1 | 21.4 | +10.4 | 20.4 | -1.0 |
| Mississippi..... | 16.5 | 36.7 | 26.5 | 26.0 | +9.5 | 28.3 | +2.3 |
| Tennessee..... | 145.8 | 203.7 | 199.1 | 191.6 | +45.8 | 193.8 | +2.2 |
| West North Central | \$ 376.7 | \$ 408.7 | \$ 321.1 | \$ 328.5 | -\$ 48.2 | \$ 475.4 | +\$146.9 |
| Iowa..... | 23.3 | 28.8 | 41.7 | 34.2 | +10.9 | 32.7 | -1.5 |
| Kansas..... | 21.5 | 25.7 | 19.8 | 39.6 | +18.1 | 16.6 | -23.0 |
| Minnesota..... | 73.6 | 106.3 | 111.1 | 89.3 | +15.7 | 109.3 | +20.0 |
| Missouri..... | 236.6 | 231.7 | 121.1 | 141.9 | -94.7 | 291.2 | +149.3 |
| Nebraska..... | 4.8 | 7.7 | 15.4 | 11.3 | +6.5 | 10.6 | -0.7 |
| North Dakota..... | 3.4 | 5.0 | 6.0 | 6.8 | +3.4 | 8.9 | +2.1 |
| South Dakota..... | 13.5 | 3.5 | 6.0 | 5.4 | -8.1 | 6.1 | +0.7 |

geographic division and State, fiscal years 1963, 1965, 1968, 1969, and 1970

(Dollars in millions)

| 1963 | 1965 | 1968 | 1969 | Net increase/ decrease 1963-69 | 1970 | Net increase/ decrease 1969-70 |
|-----------|-----------|-----------|-----------|---|-----------|---|
| \$4,665.2 | \$4,849.0 | \$4,774.3 | \$4,813.5 | +\$ 148.3 | \$4,404.1 | -\$409.4 |
| 12.1 | 14.4 | 61.8 | 68.6 | +56.5 | 43.2 | -25.4 |
| 4,296.7 | 4,553.3 | 4,298.6 | 4,289.8 | -6.9 | 3,871.1 | -418.7 |
| 7.1 | 41.5 | 35.0 | 37.7 | +30.6 | 43.8 | +6.1 |
| 18.2 | 25.6 | 35.0 | 36.1 | +17.9 | 33.8 | -2.3 |
| 331.1 | 214.3 | 343.9 | 381.2 | +50.1 | 412.2 | +31.0 |
| \$1,685.3 | \$2,154.9 | \$2,819.7 | \$2,961.3 | +\$1,276.0 | \$2,899.2 | -\$ 62.1 |
| 24.6 | 7.1 | 13.9 | 16.1 | -8.5 | 16.3 | +2 |
| 403.9 | 374.3 | 443.2 | 444.3 | +40.4 | 468.5 | +24.2 |
| 340.9 | 459.8 | 799.1 | 884.5 | +543.6 | 824.8 | -59.7 |
| 26.7 | 58.4 | 280.7 | 276.8 | +250.1 | 72.3 | -204.5 |
| 675.7 | 876.6 | 905.9 | 961.8 | +286.1 | 1,063.4 | +101.6 |
| 27.0 | 57.8 | 62.4 | 58.5 | +31.5 | 63.9 | +5.4 |
| 19.8 | 17.1 | 18.7 | 17.1 | -2.7 | 17.8 | +7 |
| 158.8 | 284.2 | 275.2 | 286.3 | +127.5 | 352.7 | +66.4 |
| 7.9 | 19.6 | 20.6 | 16.0 | +8.1 | 19.6 | +3.6 |
| \$1,789.2 | \$2,228.6 | \$2,478.4 | \$2,436.1 | +\$ 646.9 | \$2,516.9 | +\$ 80.8 |
| 410.1 | 410.7 | 681.8 | 708.9 | +298.8 | 742.5 | +33.6 |
| 944.2 | 1,289.3 | 1,174.9 | 1,107.0 | +162.8 | 1,235.6 | +128.6 |
| 434.9 | 528.7 | 616.7 | 620.3 | +185.4 | 538.8 | -81.5 |
| \$1,068.6 | \$ 990.1 | \$1,093.6 | \$1,136.7 | +\$ 68.1 | \$1,136.8 | +\$.1 |
| 174.6 | 76.6 | 71.4 | 79.2 | -95.4 | 72.8 | -6.4 |
| 240.8 | 212.3 | 265.3 | 264.4 | +23.6 | 274.1 | +9.7 |
| 29.7 | 63.6 | 65.6 | 69.6 | +39.9 | 75.0 | +5.4 |
| 8.5 | 8.6 | 8.3 | 8.3 | -2 | 11.6 | +3.3 |
| 128.9 | 154.5 | 223.6 | 232.3 | +103.4 | 190.9 | -41.4 |
| 345.9 | 425.3 | 413.3 | 426.3 | +80.4 | 444.1 | +17.8 |
| 135.8 | 45.0 | 39.7 | 49.8 | -86.0 | 61.1 | +11.3 |
| 4.5 | 4.2 | 6.4 | 6.8 | +2.3 | 7.2 | +4 |
| \$ 819.5 | \$ 923.7 | \$1,294.0 | \$1,044.3 | +\$ 224.8 | \$1,028.8 | -\$ 5.5 |
| 203.9 | 191.7 | 239.3 | 251.2 | +47.3 | 239.6 | -11.6 |
| 57.3 | 71.9 | 82.9 | 108.8 | +51.5 | 91.9 | -16.9 |
| 154.4 | 155.2 | 203.4 | 167.4 | +13.0 | 162.8 | -4.6 |
| 304.3 | 379.1 | 653.6 | 432.6 | +128.3 | 457.3 | +24.7 |
| 99.7 | 125.8 | 114.8 | 84.2 | -15.5 | 87.1 | +2.9 |
| \$ 702.2 | \$ 992.7 | \$1,009.4 | \$1,085.7 | +\$ 383.5 | \$1,000.8 | -\$ 84.9 |
| 139.3 | 184.5 | 133.2 | 223.6 | +84.3 | 160.0 | -63.6 |
| 5.3 | 4.3 | 6.0 | 14.3 | +9.0 | 13.3 | -1.0 |
| 515.1 | 733.7 | 795.7 | 775.0 | +259.9 | 760.9 | -14.1 |
| 16.9 | 28.8 | 36.6 | 31.0 | +14.1 | 27.3 | -3.7 |
| 20.5 | 37.5 | 31.1 | 32.8 | +12.3 | 29.9 | -2.9 |
| 5.2 | 4.0 | 6.8 | 9.0 | +3.8 | 9.5 | +5 |
| \$ 608.2 | \$1,143.1 | \$1,188.9 | \$ 894.3 | +\$ 286.1 | \$ 834.9 | -\$ 59.4 |
| 4.2 | 6.6 | 8.1 | 7.4 | +3.2 | 9.8 | +2.4 |
| 189.2 | 377.1 | 272.4 | 171.8 | -17.4 | 146.5 | -25.3 |
| 16.9 | 28.4 | 24.0 | 20.1 | +3.2 | 29.5 | +9.4 |
| 397.9 | 731.0 | 884.4 | 695.0 | +297.1 | 649.1 | -45.9 |
| \$ 400.1 | \$ 628.3 | \$ 655.3 | \$ 597.5 | +\$ 177.4 | \$ 599.7 | +\$ 2.2 |
| 246.8 | 370.7 | 405.7 | 358.4 | +111.6 | 357.2 | -1.2 |
| 11.0 | 17.1 | 24.1 | 21.4 | +10.4 | 20.4 | -1.0 |
| 16.5 | 36.7 | 26.5 | 26.0 | +9.5 | 28.3 | +2.3 |
| 145.8 | 203.7 | 199.1 | 191.6 | +45.8 | 193.8 | +2.2 |
| \$ 376.7 | \$ 408.7 | \$ 321.1 | \$ 328.5 | -\$ 48.2 | \$ 475.4 | +\$144.9 |
| 23.3 | 28.8 | 41.7 | 34.2 | +10.9 | 32.7 | -1.5 |
| 21.5 | 25.7 | 19.8 | 39.6 | +18.1 | 16.6 | -23.0 |
| 73.6 | 106.3 | 111.1 | 89.3 | +15.7 | 109.3 | +20.0 |
| 236.6 | 231.7 | 121.1 | 141.9 | -94.7 | 291.2 | +149.3 |
| 4.8 | 7.7 | 15.4 | 11.3 | +6.5 | 10.6 | -7 |
| 3.4 | 5.0 | 6.0 | 6.8 | +3.4 | 8.9 | +2.1 |
| 13.5 | 3.5 | 6.0 | 5.4 | -8.1 | 6.1 | +7 |

Mountain

- Within this division, which showed no overall change from 1969 to 1970, the majority of States received small increases that were counterbalanced by the decreases in Nevada and Arizona. The reduction in the work carried out at the Nevada Test Site by AEC's on-site industrial contractor accounted for the fairly sizable drop in Federal support to this State.

East North Central

- This division showed virtually no overall change in its 1970 support level relative to 1969. A moderate gain for Ohio and a small gain for Wisconsin were offset by decreases in Indiana, Illinois, and Michigan. Ohio benefited from a DOD increase in support, most of it for intramural work at Wright Patterson Air Force Base.

New England

- New England experienced a decline in R&D obligations between 1969 and 1970 for the first time in this series. Although all of the States in the division except Vermont showed decreases, the only one with a significant drop was Connecticut. This reduction was the result mainly of a cutback in industrial work for the Air Force occasioned by the cancellation of the Manned Orbiting Laboratory program.

West South Central

- This division continued to decline in 1970 but not by as much as in 1969. Texas registered the greatest loss in support, followed by Louisiana. A reduction in Navy contracts to industry was the major reason for the decline in Federal support to Texas.

East South Central

- There was no significant change in the overall total for the East South Central division between 1969 and 1970 nor in Federal support to the four States that comprise the division.

West North Central

- In 1970 this division showed both the greatest absolute gain and the greatest gain relative to its former total. Almost all of the increase occurred because of Federal support to Missouri through expanded activities of DOD and NASA. In the case of DOD a substantial increase was seen in industrial work on the Air Force F-15 aircraft. In the case of NASA the increase represented industrial research and development related to the orbital workshop and the Skylab program.

THE LEADING STATES

- The 26 leading States together received 95 percent of total Federal R&D funds, and each of these received 1 percent (rounded) or more of the Federal R&D total. Virtually the same pattern persisted throughout the 1963-70 period.

If the 10 leading States are selected for study, they line up as follows in 1970:

Distribution of Federal R&D obligations to the 10 States leading in such support in 1970 for fiscal years 1963, 1965, 1968, 1969, and 1970

| State | 1963 | 1965 | 1968 | 1969 | 1970 |
|---|----------|----------|----------|----------|----------|
| Total, all States..... (millions of dollars) | \$12,251 | \$14,357 | \$15,690 | \$15,355 | \$14,981 |
| Percent distribution | | | | | |
| California..... | 35.1 | 31.7 | 27.4 | 27.9 | 25.8 |
| New York..... | 7.7 | 9.0 | 7.5 | 7.2 | 8.2 |
| Maryland..... | 5.5 | 6.1 | 5.8 | 6.3 | 7.1 |
| Florida..... | 2.8 | 3.2 | 5.1 | 5.8 | 5.5 |
| Massachusetts..... | 4.2 | 5.1 | 5.1 | 5.0 | 5.1 |
| New Jersey..... | 3.3 | 2.9 | 4.3 | 4.6 | 5.0 |
| Texas..... | 3.2 | 5.1 | 5.6 | 4.5 | 4.3 |
| Pennsylvania..... | 3.6 | 3.1 | 3.9 | 4.0 | 3.6 |
| District of Columbia..... | 3.3 | 2.6 | 2.8 | 2.9 | 3.1 |
| Ohio..... | 2.5 | 2.6 | 4.2 | 2.8 | 3.1 |
| All other States *..... | 28.8 | 28.6 | 28.3 | 29.0 | 29.2 |

* Includes outlying areas and offices abroad.

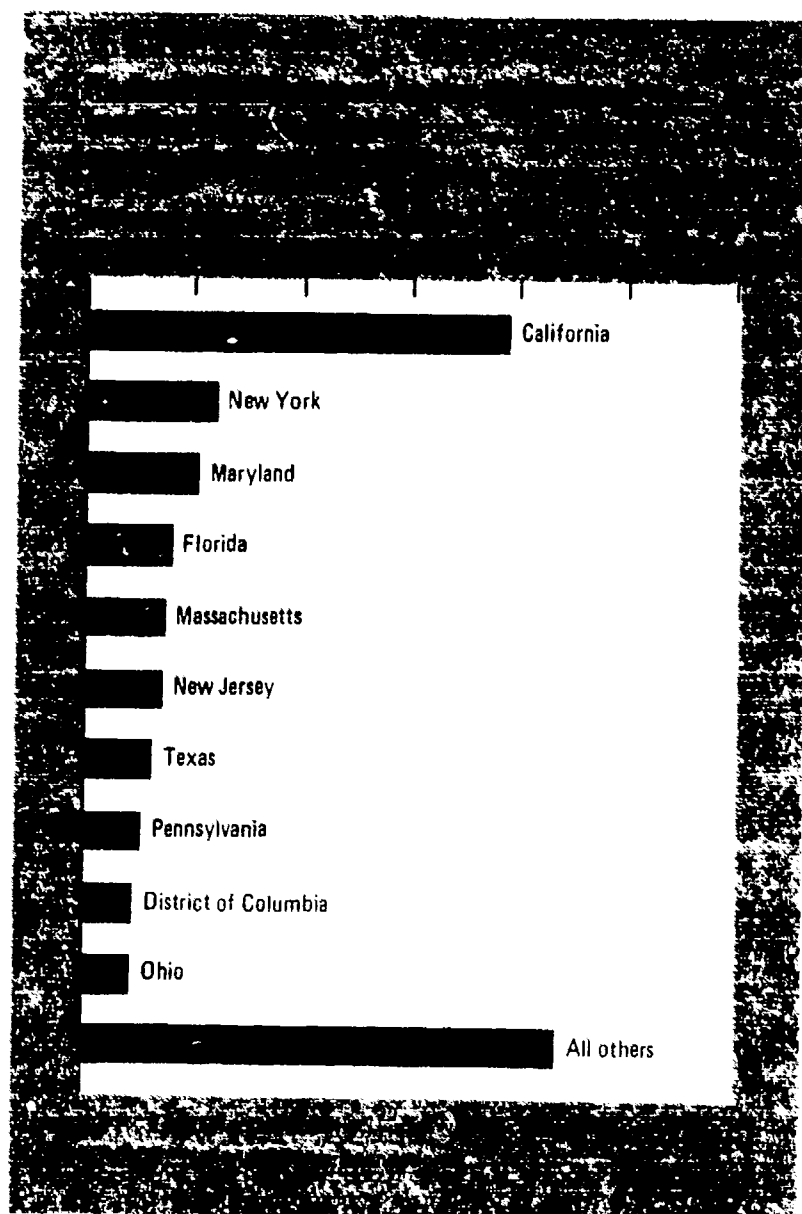
- The States above with the addition of New Mexico comprise a list of 11 States from which the "leading 10" have been drawn in 1963, 1965, 1968, 1969, and 1970. There have, of course, been variations in order from one year to another.
- The 10 leading States together received 71 percent of all Federal R&D funds in 1970, the same share the 10 leading States received in each earlier year surveyed.
- California continues to dominate the scene although its share of the total has dropped considerably, much of this drop reflecting the phase-out of NASA's Apollo program. Almost 9 out of every 10 R&D dollars obligated to California have represented obligations of DOD and NASA throughout the 1963-70 period. Other agencies placing funds to a notable extent in California are AEC, HEW, and NSF. Most of the work has been performed by industry (two-thirds in 1970). However, dollar obligations to industry fell significantly in 1970 from their 1968 and 1969 levels. Important work has also been carried on by all the other performing sectors, including universities and their affiliated research centers.
- New York's yearly R&D performance total has been around \$1 billion throughout the 1963-70 period. Nearly three-fourths of the work has been for DOD and NASA, mostly through industrial contracts. In 1970 DOD increases, largely for the Navy's F-14A aircraft program, more than offset the drop-off in work for NASA.
- Maryland is the only State to show a substantial funding increase in each year surveyed. In 1970 Federal R&D support to this State crossed the \$1 billion mark. Maryland is the only State of the leading 10, with the exception of the District of Columbia, where intramural performance predominates. Intramural work represented three-fifths of the Maryland total in 1970. A number of the larger Federal laboratories and testing facilities are located in Mary-

GEOGRAPHIC DISTRIBUTION

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land, including HEW's National Institutes of Health, the Naval Ordnance Laboratory, the Army's Edgewood Arsenal Laboratories, and NASA's Goddard Space Flight Center. However, important Federal R&D work is also carried out by industry in Maryland for DOD and NASA in aerospace and electronics areas.

- Florida has risen rapidly in performance in recent years, with some reduction in 1970. Virtually all of the R&D work performed in Florida is accomplished either by industrial firms or by Federal organizational units. Most of the industrial performance involves aircraft and electronics work for DOD and NASA. Important intramural work is represented by Air Force testing of missiles and aircraft at the Eastern Test Range and by NASA's many activities at the Kennedy Space Center.
- Massachusetts' R&D efforts continue to be predominantly directed to DOD programs. Two out of every three Federal R&D dollars obligated to Massachusetts in 1970 were from DOD, with most of the work performed by industrial firms. However, sizable portions were also carried out at Federal installations and at FFRDC's administered by universities or other nonprofit institutions.
- In New Jersey four out of every five dollars obligated in 1970 for R&D work were for DOD programs. Three out of every four dollars were obligated to industrial firms; the Army's Safeguard antiballistic missile system was the chief program involved. Virtually all of the remaining dollars were directed to R&D performance at intramural facilities.



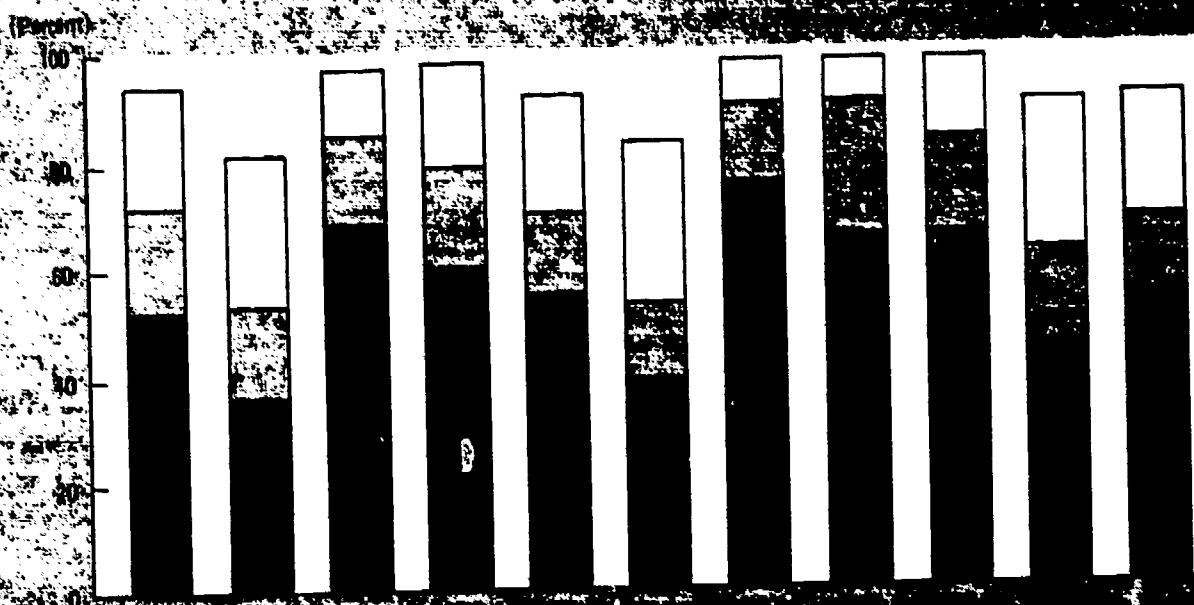
- The Texas R&D total continued to decline in 1970 from its 1968 high. Smaller DOD obligations to industry for the Air Force F-111 fighter accounted for the overall decrease. In contrast NASA, the other important support agency, slightly increased R&D funding in 1970. NASA's programs included industrial work on the Apollo spacecraft systems analysis project and intramural R&D work at the Manned Spacecraft Center in Houston.
- Pennsylvania also showed a dollar drop in R&D performance in 1970 that was mainly the result of a decrease in DOD support (primarily Air Force work by industrial firms). DOD still remains the principal supporter of R&D work in Pennsylvania; the Air Force remains the principal supporter of industrial performance and the Navy the primary support of intramural work. AEC supports research and development at the Bettis Atomic Power Laboratory, an industry-managed FFRDC.
- The District of Columbia received greater Federal R&D support in 1970 than in 1969. Seven out of 10 dollars were assigned to Federal intramural performance. For all the reporting agencies except OEO the intramural sector was the most heavily funded one within the District, and DOD accounted for almost three-fifths of the intramural total in 1970. Intramural performance includes R&D work proper as well as administration of extramural contracts and grants.
- Ohio also rose in support in 1970. This State receives R&D funds principally from DOD, both for industrial and for intramural work. Next, it receives R&D funds from NASA. For both these agencies intramural work exceeded industrial. Examples are the activities carried out for DOD at Wright Patterson Air Force Base and for NASA at the Lewis Research Center in Cleveland.

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DISPERSION OF FUNDS BY AGENCY

- Among the agencies, DOD, because of its dominance, displays a distribution pattern close to the overall one. Nine out of 10 States leading in DOD support were among the 10 leading States in total Federal R&D support in 1970.
- For HEW also, 8 of its 10 leading States were among the 10 overall Federal leaders, and the same was true for OEO. For DOT 7 of its 10 leading States were on the overall "leading 10" list, and the same was true for Commerce. For NSF the comparable number was six, and for USDA and NASA the comparable number was five in each case.
- Only Interior and AEC showed more than one-half their leading 10 States as outside the overall "leading 10" group. Both these agencies tended to place R&D funds in States in the West.
- The level of dispersion reflects in large part the purpose or mission of a particular agency. USDA and Interior, for example, are more oriented to local situations and cover all areas of the country, hence, lower percentages of their R&D funds are received by their leading 25 States than is the case with other agencies. DOD, NASA, AEC, and DOT are more concerned with specific performer capability and use this capability in areas where it already exists; the shares allotted to the 25 leading States for each of these agencies are consequently high.

R&D obligations of each agency for 1965

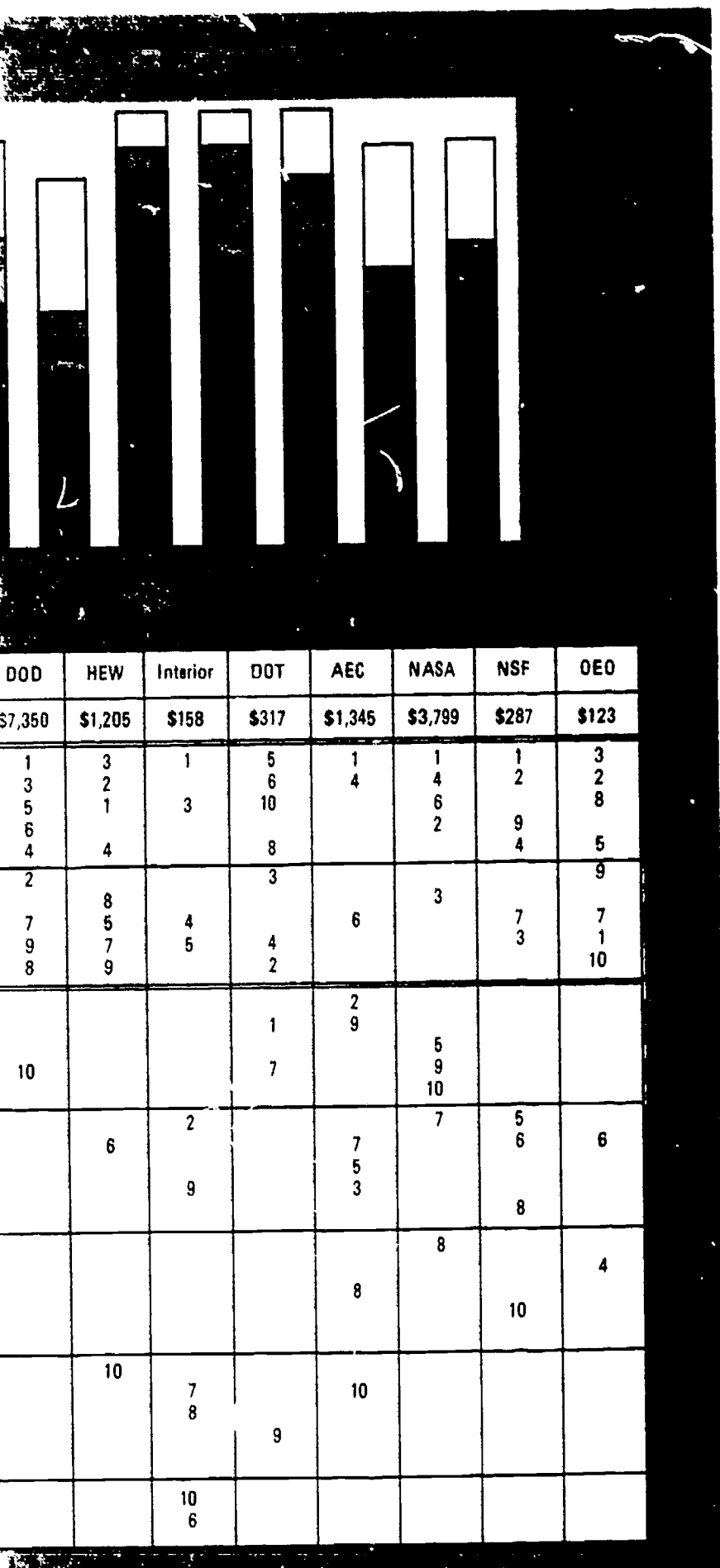


State Ranking for 1965

| State | All agencies | USDA | Commerce | DOD | HEW | Interior | DOT | AEC | NASA | NSF | OEO |
|---------------------------------|--------------|-------|----------|---------|---------|----------|-------|---------|---------|-------|-------|
| Total R&D (millions of dollars) | \$14,981 | \$276 | \$120 | \$7,350 | \$1,205 | \$158 | \$317 | \$1,345 | \$3,799 | \$287 | \$123 |
| California | 1 | 2 | 6 | 1 | 3 | 1 | 5 | 1 | 1 | 1 | 3 |
| New York | 2 | | 4 | 3 | 2 | | 6 | 4 | 4 | 2 | 2 |
| Maryland | 3 | 1 | 1 | 5 | 1 | 3 | 10 | | 6 | | 8 |
| Florida | 4 | | 7 | 6 | | | | | 2 | 9 | |
| Massachusetts | 5 | | 8 | 4 | 4 | | 8 | | | 4 | 5 |
| New Jersey | 6 | | | 2 | | | 3 | | | | 9 |
| Texas | 7 | 7 | 10 | 7 | 8 | | | 6 | 3 | 7 | 7 |
| Pennsylvania | 8 | 8 | | 7 | 5 | 4 | | | | 3 | 1 |
| District of Columbia | 9 | 3 | 2 | 9 | 7 | 5 | 4 | | | | 10 |
| Ohio | 10 | | | 8 | 9 | | 2 | | | | |
| New Mexico | | | | | | | | 2 | | | |
| Washington | | | 5 | | | | 1 | 9 | | | |
| Alabama | | | | 10 | | | 7 | | 5 | | |
| Virginia | | | | | | | | | 9 | | |
| Missouri | | | | | | | | | 10 | | |
| Colorado | | | 3 | | | 2 | | | 7 | 5 | 6 |
| Illinois | | 6 | | | 6 | | | 7 | | | |
| Tennessee | | | | | | 9 | | 5 | | | |
| Nevada | | | | | | | | 3 | | 8 | |
| Michigan | | | | | | | | | | | |
| Louisiana | | 4 | | | | | | | 8 | | 4 |
| Wisconsin | | 9 | | | | | | 8 | | | |
| Idaho | | | | | | | | | | 10 | |
| Arizona | | | | | | | | | | | |
| Georgia | | 5 | | | | | | | | | |
| North Carolina | | | 9 | | 10 | 7 | | 10 | | | |
| Alaska | | | | | | 8 | | | | | |
| Oregon | | | | | | | 9 | | | | |
| Oklahoma | | 10 | | | | | | | | | |
| Mississippi | | | | | | | | | | | |
| West Virginia | | | | | | 10 | | | | | |
| Wyoming | | | | | | 6 | | | | | |

Source: National Science Foundation

GEOGRAPHIC DISTRIBUTION



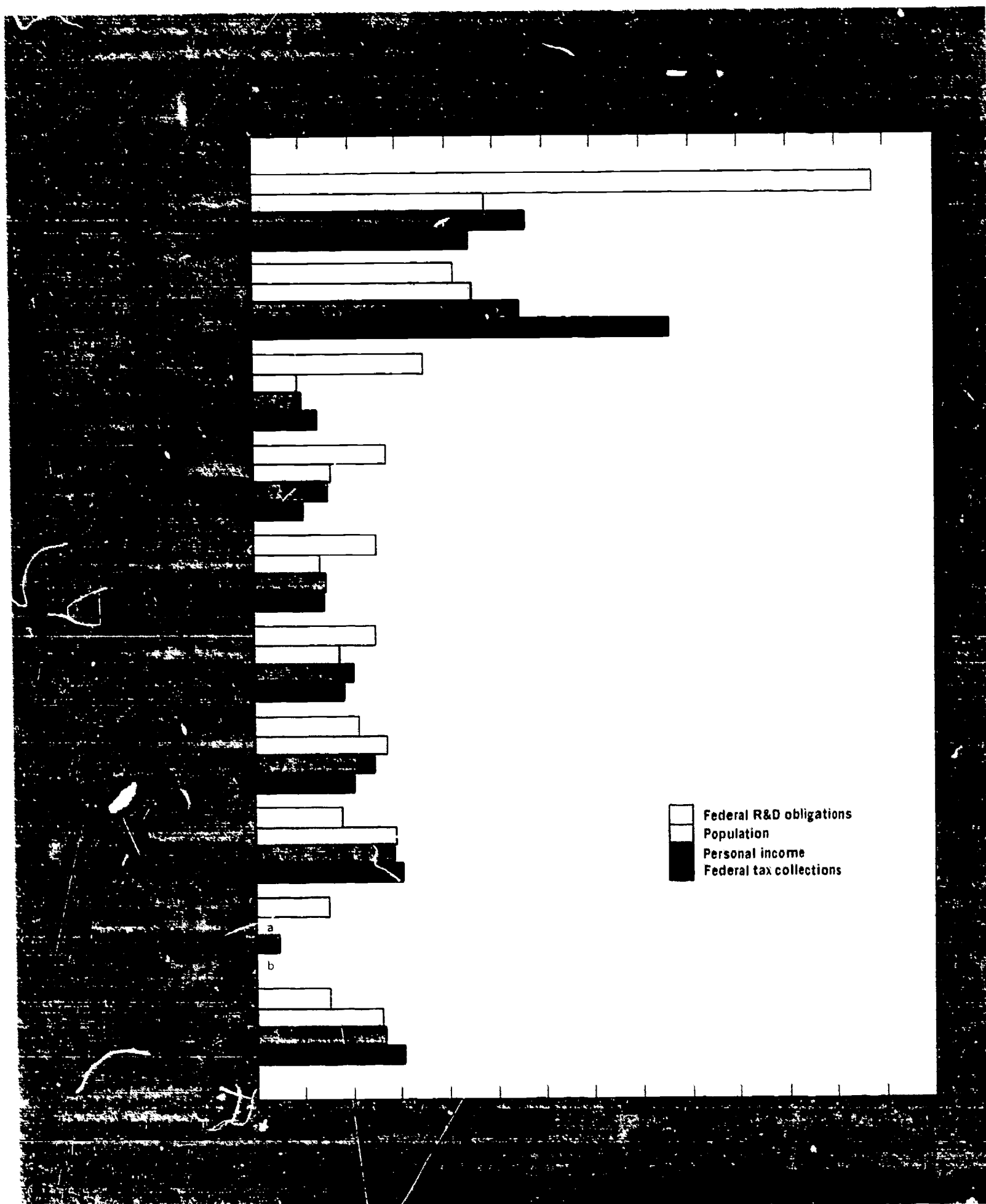
The 10 States leading in Federal R&D obligations in FY 1970 compared with their relative positions among all States in Federal R&D support of performer groups

| States leading in Federal R&D support | Percent of total Federal R&D support | Position among all States in Federal R&D support of performer groups | | | | | |
|---------------------------------------|--------------------------------------|--|-------------------------------|---------------------------|--------------------------------------|---|-------|
| | | Federal intramural | Industrial firms ^a | Universities and colleges | FFRDC's administered by universities | Other nonprofit institutions ^a | Other |
| 1. California..... | 25.8 | 2 | 1 | 1 | 1 | 1 | 2 |
| 2. New York..... | 8.2 | 13 | 2 | 2 | 5 | 3 | 1 |
| 3. Maryland..... | 7.1 | 1 | 9 | 9 | 6 | 10 | 4 |
| 4. Florida..... | 5.5 | 4 | 4 | 13 | ----- | 28 | 12 |
| 5. Massachusetts..... | 5.1 | 11 | 6 | 3 | 4 | 2 | 7 |
| 6. New Jersey..... | 5.0 | 9 | 3 | 19 | 9 | 18 | 10 |
| 7. Texas..... | 4.3 | 8 | 5 | 6 | ----- | 12 | 5 |
| 8. Pennsylvania..... | 3.6 | 12 | 7 | 5 | 11 | 9 | 6 |
| 9. District of Columbia..... | 3.1 | 3 | 21 | 22 | 18 | 5 | 3 |
| 10. Ohio..... | 3.1 | 6 | 13 | 8 | ----- | 6 | 9 |
| All other States..... | 29.2 | ----- | ----- | ----- | ----- | ----- | ----- |

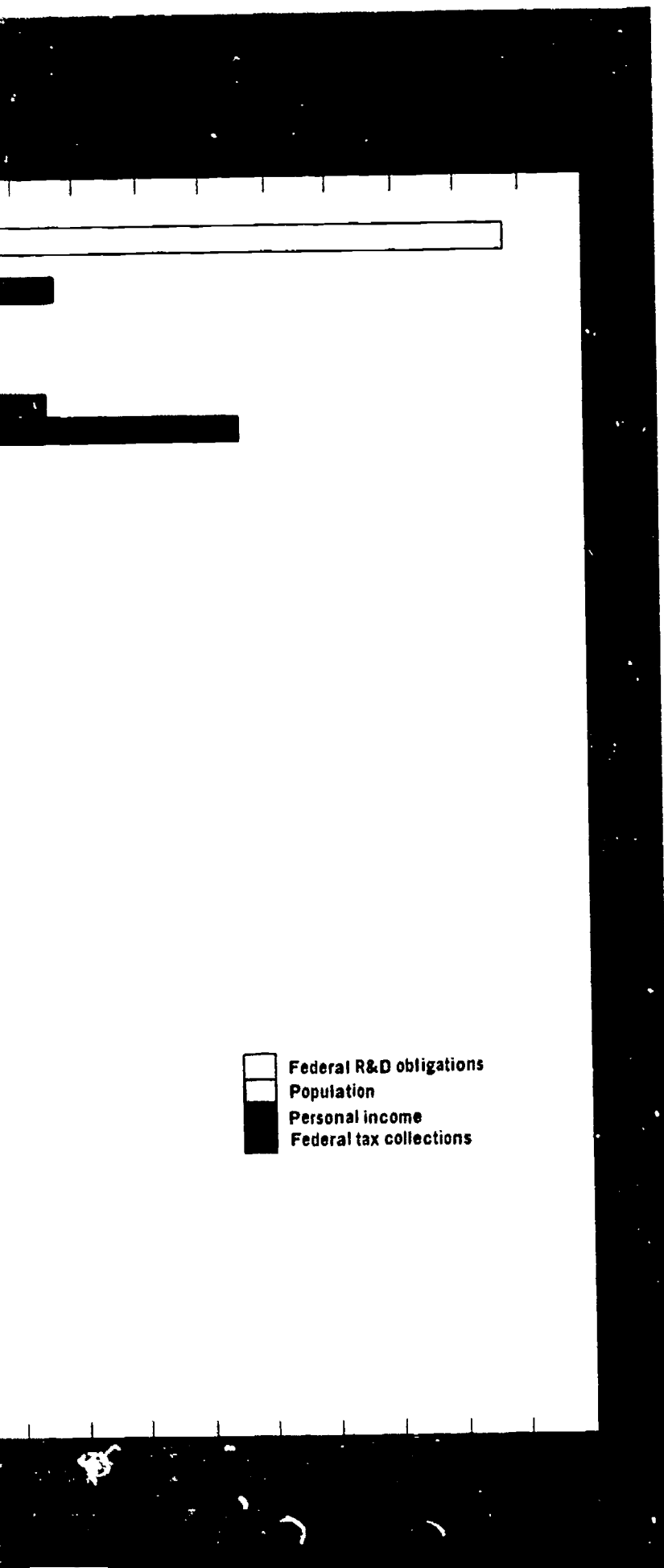
^a Includes FFRDC's administered by this sector.

FACTORS IN R&D PERFORMING STRENGTH

- In 1970 there were 23 States that received more than \$100 million in Federal R&D obligations.
- Many of these States are highly industrialized, containing aircraft and electronics manufacturing firms, electrical equipment and communications firms, machinery and chemical producers. Among the 10 leading R&D support States on an overall basis, eight were among the leading 10 in Federal R&D obligations to industry.
- Most of the States strong in Federal support show strength in a number of performer categories. Seven States among the 10 overall leaders were among the leading 10 States in Federal R&D support to universities and colleges; seven were among the leading 10 in Federal intramural performance; and seven were among the 10 leaders in Federal R&D support to other nonprofit institutions.
- The continuance of substantial Federal R&D support in a State is usually dependent on performer capability in several sectors. However, some States receive agency funds because they offer advantages of one particular kind, such as: Nevada for weapons testing or West Virginia for astronomical observations.



GEOGRAPHIC DISTRIBUTION



- R&D obligations can be ranked by State and compared with such measures of national activity as population, total personal income, and total Federal taxes. Although no direct cause and effect conclusions can be drawn, the data tend to indicate that the wider choice of skills and institutions found in more populous and wealth-producing areas is related to the selection of given States for R&D performance.

Federal R&D obligations
Population
Personal income
Federal tax collections

**Distribution of Federal R&D obligations by State compared with other measures
of national activity, by State, 1970**

| State | Total Federal R&D obligations | | Population | | Total personal income | | Total Federal taxes ^a | |
|------------------------------------|-------------------------------|------------------|------------|------------------|-----------------------|------------------|----------------------------------|------------------|
| | Rank | Percent of total | Rank | Percent of total | Rank | Percent of total | Rank | Percent of total |
| United States, total (in millions) | | \$14,981 | | 203 | | \$797,075 | | \$180,339 |
| California | 1 | 25.84 | 1 | 9.82 | 1 | 11.26 | 2 | 8.92 |
| New York | 2 | 8.25 | 2 | 8.98 | 2 | 10.97 | 1 | 17.19 |
| Maryland | 3 | 7.10 | 18 | 1.93 | 13 | 2.10 | 10 | 2.67 |
| Florida | 4 | 5.51 | 9 | 3.34 | 9 | 3.08 | 14 | 2.12 |
| Massachusetts | 5 | 5.08 | 10 | 2.80 | 10 | 3.07 | 9 | 2.85 |
| New Jersey | 6 | 4.96 | 8 | 3.53 | 8 | 4.10 | 8 | 3.68 |
| Texas | 7 | 4.33 | 4 | 5.51 | 6 | 4.96 | 7 | 4.22 |
| Pennsylvania | 8 | 3.60 | 3 | 5.80 | 4 | 5.77 | 6 | 6.07 |
| District of Columbia | 9 | 3.13 | 41 | .37 | 36 | .52 | (9) | (9) |
| Ohio | 10 | 3.05 | 6 | 5.24 | 5 | 5.34 | 5 | 6.08 |
| New Mexico | 11 | 2.96 | 37 | .50 | 41 | .39 | 44 | .20 |
| Washington | 12 | 2.75 | 22 | 1.68 | 20 | 1.72 | 21 | 1.31 |
| Alabama | 13 | 2.38 | 21 | 1.69 | 25 | 1.22 | 28 | .71 |
| Virginia | 14 | 2.35 | 14 | 2.29 | 14 | 2.10 | 19 | 1.45 |
| Missouri | 15 | 1.94 | 13 | 2.30 | 12 | 2.15 | 11 | 2.66 |
| Colorado | 16 | 1.83 | 30 | 1.09 | 28 | 1.05 | 22 | 1.28 |
| Illinois | 17 | 1.60 | 5 | 5.47 | 3 | 6.31 | 3 | 7.70 |
| Tennessee | 18 | 1.29 | 17 | 1.93 | 21 | 1.51 | 23 | 1.01 |
| Nevada | 19 | 1.27 | 48 | .24 | 46 | .28 | 43 | .21 |
| Michigan | 20 | 1.09 | 7 | 4.37 | 7 | 4.52 | 4 | 6.95 |
| Connecticut | 21 | 1.07 | 24 | 1.49 | 18 | 1.84 | 17 | 1.79 |
| Louisiana | 22 | .98 | 20 | 1.79 | 22 | 1.41 | 25 | .83 |
| Minnesota | 23 | .73 | 19 | 1.87 | 19 | 1.82 | 15 | 1.82 |
| Indiana | 24 | .61 | 11 | 2.56 | 11 | 2.47 | 12 | 2.42 |
| Wisconsin | 25 | .58 | 16 | 2.17 | 15 | 2.07 | 16 | 1.80 |
| Idaho | 26 | .50 | 43 | .35 | 45 | .29 | 41 | .23 |
| Arizona | 27 | .49 | 33 | .87 | 31 | .79 | 34 | .43 |
| Georgia | 28 | .48 | 15 | 2.26 | 17 | 1.89 | 18 | 1.49 |
| North Carolina | 29 | .43 | 12 | 2.50 | 16 | 2.04 | 13 | 2.18 |
| Utah | 30 | .41 | 36 | .52 | 39 | .43 | 39 | .24 |
| Hawaii | 31 | .29 | 40 | .38 | 38 | .43 | 38 | .30 |
| Alaska | 32 | .29 | 51 | .15 | 50 | .18 | 49 | .08 |
| Oregon | 33 | .23 | 31 | 1.03 | 29 | .98 | 27 | .73 |
| Iowa | 34 | .22 | 25 | 1.39 | 23 | 1.32 | 26 | .81 |
| Rhode Island | 35 | .20 | 39 | .47 | 37 | .47 | 33 | .44 |
| Oklahoma | 36 | .20 | 27 | 1.26 | 27 | 1.05 | 24 | .88 |
| Mississippi | 37 | .19 | 29 | 1.09 | 32 | .71 | 37 | .32 |
| New Hampshire | 38 | .18 | 41 | .36 | 42 | .34 | 42 | .22 |
| Kentucky | 39 | .14 | 23 | 1.58 | 24 | 1.24 | 20 | 1.40 |
| West Virginia | 40 | .13 | 34 | .86 | 35 | .64 | 35 | .33 |
| South Carolina | 41 | .12 | 26 | 1.27 | 30 | .95 | 32 | .53 |
| Kansas | 42 | .11 | 28 | 1.11 | 26 | 1.07 | 30 | .64 |
| Delaware | 43 | .11 | 47 | .26 | 44 | .29 | 38 | .57 |

| | 9 | 3.13 | 41 | .37 | 36 | .52 | (c) | (c) |
|-----------------------------------|----|------|----|------|----|------|-----|------|
| District of Columbia | 10 | 3.05 | 6 | 5.24 | 5 | 5.34 | 5 | 6.08 |
| Ohio | | | | | | | | |
| New Mexico | 11 | 2.96 | 37 | .50 | 41 | .39 | 44 | .20 |
| Washington | 12 | 2.75 | 22 | 1.68 | 20 | 1.72 | 21 | 1.31 |
| Alabama | 13 | 2.38 | 21 | 1.69 | 25 | 1.22 | 28 | .71 |
| Virginia | 14 | 2.35 | 14 | 2.29 | 14 | 2.10 | 19 | 1.45 |
| Missouri | 15 | 1.94 | 13 | 2.30 | 12 | 2.15 | 11 | 2.66 |
| Colorado | 16 | 1.83 | 30 | 1.09 | 28 | 1.05 | 22 | 1.28 |
| Illinois | 17 | 1.60 | 5 | 5.47 | 3 | 6.31 | 3 | 7.70 |
| Tennessee | 18 | 1.29 | 17 | 1.93 | 21 | 1.51 | 23 | 1.01 |
| Nevada | 19 | 1.27 | 48 | .24 | 46 | .28 | 43 | .21 |
| Michigan | 20 | 1.09 | 7 | 4.37 | 7 | 4.52 | 4 | 6.95 |
| Connecticut | 21 | 1.07 | 24 | 1.49 | 18 | 1.84 | 17 | 1.79 |
| Louisiana | 22 | .98 | 20 | 1.79 | 22 | 1.41 | 25 | .83 |
| Minnesota | 23 | .73 | 19 | 1.87 | 19 | 1.82 | 15 | 1.82 |
| Indiana | 24 | .61 | 11 | 2.56 | 11 | 2.47 | 12 | 2.42 |
| Wisconsin | 25 | .58 | 16 | 2.17 | 15 | 2.07 | 16 | 1.80 |
| Idaho | 26 | .50 | 43 | .35 | 45 | .29 | 41 | .23 |
| Arizona | 27 | .49 | 33 | .87 | 31 | .79 | 34 | .43 |
| Georgia | 28 | .48 | 15 | 2.26 | 17 | 1.89 | 18 | 1.49 |
| North Carolina | 29 | .43 | 12 | 2.50 | 16 | 2.04 | 13 | 2.18 |
| Utah | 30 | .41 | 36 | .52 | 39 | .43 | 39 | .24 |
| Hawaii | 31 | .29 | 40 | .38 | 38 | .43 | 38 | .30 |
| Alaska | 32 | .29 | 51 | .15 | 50 | .18 | 49 | .08 |
| Oregon | 33 | .23 | 31 | 1.03 | 29 | .98 | 27 | .73 |
| Iowa | 34 | .22 | 25 | 1.39 | 23 | 1.32 | 26 | .81 |
| Rhode Island | 35 | .20 | 39 | .47 | 37 | .47 | 33 | .44 |
| Oklahoma | 36 | .20 | 27 | 1.26 | 27 | 1.05 | 24 | .88 |
| Mississippi | 37 | .19 | 29 | 1.09 | 32 | .71 | 37 | .32 |
| New Hampshire | 38 | .18 | 41 | .36 | 42 | .34 | 42 | .22 |
| Kentucky | 39 | .14 | 23 | 1.58 | 24 | 1.24 | 20 | 1.40 |
| West Virginia | 40 | .13 | 34 | .86 | 35 | .64 | 35 | .33 |
| South Carolina | 41 | .12 | 26 | 1.27 | 30 | .95 | 32 | .53 |
| Kansas | 42 | .11 | 28 | 1.11 | 26 | 1.07 | 30 | .64 |
| Delaware | 43 | .11 | 47 | .27 | 44 | .29 | 29 | .67 |
| Maine | 44 | .09 | 38 | .49 | 40 | .40 | 40 | .24 |
| Montana | 45 | .08 | 44 | .34 | 43 | .29 | 45 | .14 |
| Nebraska | 46 | .07 | 35 | .73 | 33 | .69 | 31 | .58 |
| Arkansas | 47 | .07 | 32 | .95 | 34 | .66 | 36 | .33 |
| Vermont | 48 | .06 | 50 | .22 | 49 | .20 | 48 | .11 |
| North Dakota | 49 | .06 | 46 | .30 | 48 | .23 | 47 | .12 |
| Wyoming | 50 | .05 | 49 | .16 | 51 | .14 | 50 | .08 |
| South Dakota | 51 | .04 | 45 | .33 | 47 | .27 | 46 | .12 |
| Outlying areas and offices abroad | | .49 | | | | | | 4.43 |

^a Includes individual income and employment taxes, corporation, excise, estate, and gift taxes (minus refunds).

^b Includes persons stationed in the armed forces in each area.

^c Included in Maryland tax figures.

^d Collections from and refunds to U.S. taxpayers in Puerto Rico, Canal Zone, and in foreign countries.

Sources: U.S. Department of Commerce, Population Estimates and Projections, Series P-25, No. 460, June 7, 1971; U.S. Department of Commerce, Office of Business Economics, Survey of Current Business, Volume 51, No. 4, April 1971; U.S. Department of the Treasury, Statistical Appendix to Annual Report of the Secretary of the Treasury on the State of the Finances for the Fiscal Year Ended June 30, 1972.

R&D PLANT

- R&D plant funding distribution has shifted somewhat over the years as new programs have been initiated. A salient feature of such funding has been its sharp reduction since the mid-1960's. The R&D plant total of \$520 million in 1970 was 22 percent less than the 1969 total and 55 percent less than the 1963 total.
- Alabama and Texas were among the leading 10 States in R&D plant obligations in 1963 but were not included in the 1970 list because NASA had completed its construction programs in those States. Also, R&D plant obligations to Florida had diminished by 1970 to a small fraction of their 1963 level, largely for the same reason, and California's R&D plant support funds in 1970 had dropped well below their 1963 level.

- Idaho and Pennsylvania were the only States on the "leading 10" list in 1970 but not in 1963.
- Only New Mexico and Illinois showed increases from their 1963 totals. Illinois' leadership among all the States in 1970 represented construction activity on AEC's 200-BeV accelerator in Weston.

IMPACT OF SUBCONTRACTING

As previously noted, data on geographic distribution in this report are based on the location of prime contractors performing R&D work. Therefore, they do not reflect the redistribution of Federal R&D funds among the States as a result of subcontracting.

Federal obligations for R&D plant in the 10 States leading in such support, by agency, FY 1970

[Dollars in millions]

| | AEC | DOD | NASA | HEW | NSF | INT. | USDA | DOT | COM-MERCE |
|---------------------------|-----|-----|------|-----|-----|------|------|-----|-----------|
| Illinois | 86 | 5 | — | — | — | 2 | a | — | — |
| California | 29 | 32 | 17 | 5 | 3 | a | a | a | a |
| New Mexico | 47 | 16 | — | — | — | a | a | — | — |
| Florida | a | 25 | 5 | 2 | 1 | a | a | — | a |
| New York | 22 | 2 | a | — | 2 | 1 | a | — | a |
| Idaho | 23 | — | a | — | a | a | a | — | a |
| Ohio | 1 | 7 | 4 | 9 | a | a | a | — | — |
| Maryland | a | 18 | 1 | a | a | a | a | a | 1 |
| Pennsylvania | 11 | 2 | a | — | 4 | 2 | a | a | — |
| Nevada | 14 | — | a | — | a | — | a | — | — |
| Other States ^b | 33 | 3* | 6 | 15 | 12 | 6 | 5 | 5 | 3 |

^a/ Less than \$500,000.

^b/ Includes outlying areas and offices abroad.

- Idaho and Pennsylvania were the only States on the "leading 10" list in 1970 but not in 1963.
- Only New Mexico and Illinois showed increases from their 1963 totals. Illinois' leadership among all the States in 1970 represented construction activity on AEC's 200-BeV accelerator in Weston.

IMPACT OF SUBCONTRACTING

As previously noted, data on geographic distribution in this report are based on the location of prime contractors performing R&D work. Therefore, they do not reflect the redistribution of Federal R&D funds among the States as a result of subcontracting.

plant in the 10 States leading
agency, FY 1970

millions]

| HEW | NSF | INT. | USDA | DOT | COM- MERCE |
|-----|-----|------|------|-----|---------------|
| — | — | 2 | a | — | — |
| 5 | 3 | a | a | a | a |
| — | — | a | a | — | — |
| 2 | 1 | a | a | — | a |
| — | 2 | 1 | a | — | a |
| — | a | a | a | — | a |
| 9 | a | a | a | — | — |
| a | a | a | a | a | 1 |
| — | 4 | 2 | a | a | — |
| — | a | — | a | — | — |
| 15 | 12 | 6 | 5 | 5 | 3 |

GEOGRAPHIC DISTRIBUTION

In order to provide some understanding of the impact of subcontracting, the responding agencies were requested to report the geographic distribution of 1970 first-tier subcontracting under each new, or continuing, prime contract or grant for which \$20 million or more was obligated in 1970. The request was for data on first-tier subcontracts awarded in 1970 regardless of the year of the appropriation funding the subcontract.

DOD and AEC together provided first-tier subcontracting data for 40 prime contracts. NASA has a reporting system which provides information on all first-tier subcontracts in excess of \$10,000 on each of the agency's prime contracts in excess of \$500,000 and on second-tier subcontracts in excess of \$10,000 on each of the first-tier subcontracts in excess of \$50,000. The remaining seven agencies participating in this survey did not have prime contracts or subcontracts meeting the criteria established in the survey.

Most of the subcontracting is done by industrial firms; subcontracting is considerably less important with most of the other performers. Since more than 95 percent of total performance by industry (including industry-administered FFRDC's) as reported in this survey was in support of the programs of DOD, AEC, and NASA, the subcontracting of these three agencies largely determines the overall geographic impact of R&D subcontracting.

The sample shows that significant redistribution of R&D funds among States would be reflected by full subcontracting data. The share of the leading R&D support States would tend to decrease somewhat (although the net change would be small in relation to their prime contracts), but in the case of many smaller support States, the net increase from subcontracts would be important in relation to prime contracts awarded.

U. S. geographical distribution of NASA prime contract and subcontract awards fiscal year 1970

[Dollars in thousands]

| State | Prime contract awards to State | | Subcontract awards | | | Net total—prime contract and subcontract awards | |
|---------------------------|--------------------------------|------------------|----------------------------|-------------------------|---------------------|---|------------------|
| | Amount | Percent of total | Received from other States | Awarded to other States | Net Total | Amount ^a | Percent of total |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
| Total..... | \$2,830,988 | 100.0 | \$288,269 | \$288,269 | \$..... | \$2,830,988 | 100.0 |
| Alabama..... | 155,005 | 5.5 | 2,253 | 12,088 | ^b 9,835 | 145,170 | 5.1 |
| Alaska..... | 295 | (^c) | 51 | ..... | 51 | 346 | (^c) |
| Arizona..... | 6,707 | .2 | 8,192 | 160 | 8,032 | 14,739 | .5 |
| Arkansas..... | 64 | (^c) | ..... | ..... | ..... | 64 | (^c) |
| California..... | 874,791 | 30.9 | 85,522 | 107,476 | ^b 21,954 | 852,837 | 30.1 |
| Colorado..... | 119,579 | 4.2 | 7,974 | 29,857 | ^b 21,883 | 97,696 | 3.5 |
| Connecticut..... | 26,213 | .9 | 12,024 | 2,285 | 9,739 | 35,952 | 1.3 |
| Delaware..... | 13,399 | .5 | 80 | ..... | 80 | 13,479 | .5 |
| District of Columbia..... | 31,061 | 1.1 | 32 | 35 | ^b 3 | 31,058 | 1.1 |
| Florida..... | 295,379 | 10.4 | 4,193 | 6,483 | ^b 2,290 | 293,089 | 10.4 |
| Georgia..... | 3,596 | .1 | 327 | ..... | 327 | 3,923 | .1 |
| Hawaii..... | 3,978 | .1 | ..... | ..... | ..... | 3,978 | .1 |
| Idaho..... | 150 | (^c) | ..... | ..... | ..... | 150 | (^c) |
| Illinois..... | 9,877 | .3 | 1,486 | ..... | 1,486 | 11,363 | .4 |
| Indiana..... | 4,427 | .2 | 920 | ..... | 920 | 5,347 | .2 |
| Iowa..... | 4,039 | .1 | 1,359 | 37 | 1,322 | 5,361 | .2 |
| Kansas..... | 1,100 | (^c) | ..... | ..... | ..... | 1,100 | (^c) |
| Kentucky..... | 325 | (^c) | 42 | ..... | 42 | 367 | (^c) |
| Louisiana..... | 109,092 | 3.9 | 144 | 1,767 | ^b 1,623 | 107,469 | 3.8 |
| Maine..... | 4,490 | .2 | ..... | ..... | ..... | 4,490 | .2 |
| Maryland..... | 140,901 | 5.0 | 1,361 | 1,472 | ^b 111 | 140,790 | 5.0 |
| Massachusetts..... | 82,341 | 2.9 | 22,721 | 3,137 | 19,584 | 101,925 | 3.6 |
| Michigan..... | 27,489 | 1.0 | 2,244 | 2,045 | 199 | 27,688 | 1.0 |
| Minnesota..... | 30,641 | 1.1 | 5,303 | 301 | 5,002 | 35,643 | 1.3 |
| Mississippi..... | 1,969 | .1 | 2,324 | 45 | 2,279 | 4,248 | .2 |
| Missouri..... | 103,412 | 3.7 | 2,261 | 26,083 | ^b 23,822 | 79,590 | 2.8 |
| Nebraska..... | 111 | (^c) | 1,551 | 630 | 921 | 1,032 | (^c) |
| Nevada..... | 863 | (^c) | ..... | ..... | ..... | 863 | (^c) |
| New Hampshire..... | 3,647 | .1 | 291 | ..... | 291 | 3,938 | .1 |
| New Jersey..... | 53,786 | 1.9 | 36,803 | 6,477 | 30,326 | 84,112 | 3.0 |
| New Mexico..... | 9,491 | .3 | 303 | ..... | 303 | 9,794 | .3 |
| New York..... | 299,878 | 10.6 | 11,589 | 68,600 | ^b 57,011 | 242,867 | 8.6 |
| North Carolina..... | 2,359 | .1 | 242 | ..... | 242 | 2,601 | .1 |
| North Dakota..... | ..... | ..... | 12 | ..... | 12 | 12 | (^c) |
| Ohio..... | 37,950 | 1.3 | 4,577 | 2,973 | 1,604 | 39,554 | 1.4 |
| Oklahoma..... | 1,126 | (^c) | 440 | 38 | 402 | 1,528 | .1 |
| Oregon..... | 579 | (^c) | 174 | ..... | 174 | 753 | (^c) |
| Pennsylvania..... | 44,069 | 1.6 | 41,107 | 1,699 | 39,408 | 83,477 | 2.9 |
| Rhode Island..... | 667 | (^c) | 301 | ..... | 301 | 968 | (^c) |
| South Carolina..... | 270 | (^c) | 14 | ..... | 14 | 284 | (^c) |
| South Dakota..... | 57 | (^c) | ..... | ..... | ..... | 57 | (^c) |
| Tennessee..... | 1,614 | .1 | 448 | ..... | 448 | 2,062 | .1 |
| Texas..... | 266,468 | 9.4 | 22,813 | 9,675 | 13,138 | 279,606 | 9.9 |
| Utah..... | 1,306 | (^c) | 103 | 89 | 14 | 1,320 | (^c) |
| Vermont..... | 171 | (^c) | 464 | ..... | 464 | 635 | (^c) |
| Virginia..... | 30,470 | 1.1 | 1,219 | 24 | 1,195 | 31,665 | 1.1 |
| Washington..... | 4,301 | .2 | 3,316 | ..... | 3,316 | 7,617 | .3 |
| West Virginia..... | 313 | (^c) | ..... | ..... | ..... | 313 | (^c) |
| Wisconsin..... | 21,054 | .7 | 1,689 | 4,793 | ^b 3,104 | 17,950 | .6 |
| Wyoming..... | 118 | (^c) | ..... | ..... | ..... | 118 | (^c) |

NOTE: Prime contract awards include awards on R&D contracts and awards to educational and nonprofit institutions of \$10,000 and over and on all other contracts of \$25,000 and over; they exclude awards placed through other Government agencies, awards outside the U.S., and actions on the JPL contracts. Subcontract awards include those of \$10,000 and over on prime contracts of \$500,000 and over.

^a Column (b) plus or minus column (f).

^b Awards to other States exceed the awards from other States.

^c Less than 0.5 percent.

Source: NASA, Annual Procurement Report, Fiscal Year 1970.

NASA prime contract and subcontract awards fiscal year 1970

(Dollars in thousands)

| Prime contract awards to State | | Subcontract awards | | | Net total—prime contract and subcontract awards | |
|--------------------------------|------------------|----------------------------|-------------------------|-----------|---|------------------|
| Amount | Percent of total | Received from other States | Awarded to other States | Net Total | Amount * | Percent of total |
| (b) | (c) | (d) | (e) | (f) | (g) | (h) |
| \$2,830,988 | 100.0 | \$288,269 | \$288,269 | \$----- | \$2,830,988 | 100.0 |
| 155,005 | 5.5 | 2,253 | 12,088 | b 9,835 | 145,170 | 5.1 |
| 295 | (c) | 51 | ----- | 51 | 346 | (c) |
| 6,707 | .2 | 8,192 | 160 | 8,032 | 14,739 | .5 |
| 64 | (c) | ----- | ----- | ----- | 64 | (c) |
| 874,791 | 30.9 | 85,522 | 107,476 | b 21,954 | 852,837 | 30.1 |
| 119,579 | 4.2 | 7,974 | 29,857 | b 21,883 | 97,696 | 3.5 |
| 26,213 | .9 | 12,024 | 2,285 | 9,739 | 35,952 | 1.3 |
| 13,399 | .5 | 80 | ----- | 80 | 13,479 | .5 |
| 31,061 | 1.1 | 32 | 35 | b 3 | 31,058 | 1.1 |
| 295,379 | 10.4 | 4,193 | 6,483 | b 2,290 | 293,089 | 10.4 |
| 3,596 | .1 | 327 | ----- | 327 | 3,923 | .1 |
| 3,978 | .1 | ----- | ----- | ----- | 3,978 | .1 |
| 150 | (c) | ----- | ----- | ----- | 150 | (c) |
| 9,877 | .3 | 1,486 | ----- | 1,486 | 11,363 | .4 |
| 4,427 | .2 | 920 | ----- | 920 | 5,347 | .2 |
| 4,039 | .1 | 1,359 | 37 | 1,322 | 5,361 | .2 |
| 1,100 | (c) | ----- | ----- | ----- | 1,100 | (c) |
| 325 | (c) | 42 | ----- | 42 | 367 | (c) |
| 109,092 | 3.9 | 144 | 1,767 | b 1,623 | 107,469 | 3.8 |
| 4,490 | .2 | ----- | ----- | ----- | 4,490 | .2 |
| 140,901 | 5.0 | 1,361 | 1,472 | b 111 | 140,790 | 5.0 |
| 82,341 | 2.9 | 22,721 | 3,137 | 19,584 | 101,925 | 3.6 |
| 27,489 | 1.0 | 2,244 | 2,045 | 199 | 27,688 | 1.0 |
| 30,641 | 1.1 | 5,303 | 301 | 5,002 | 35,643 | 1.3 |
| 1,969 | .1 | 2,324 | 45 | 2,279 | 4,248 | .2 |
| 103,412 | 3.7 | 2,261 | 26,083 | b 23,822 | 79,590 | 2.8 |
| 111 | (c) | 1,551 | 630 | 921 | 1,032 | (c) |
| 863 | (c) | ----- | ----- | ----- | 863 | (c) |
| 3,647 | .1 | 291 | ----- | 291 | 3,938 | .1 |
| 53,786 | 1.9 | 36,803 | 6,477 | 30,326 | 84,112 | 3.0 |
| 9,491 | .3 | 303 | ----- | 303 | 9,794 | .3 |
| 299,878 | 10.6 | 11,589 | 68,600 | b 57,011 | 242,867 | 8.6 |
| 2,359 | .1 | 242 | ----- | 242 | 2,601 | .1 |
| 37,950 | 1.3 | 4,577 | 2,973 | 1,604 | 39,554 | 1.4 |
| 1,126 | (c) | 440 | 38 | 402 | 1,528 | .1 |
| 579 | (c) | 174 | ----- | 174 | 753 | (c) |
| 44,069 | 1.6 | 41,107 | 1,699 | 39,408 | 83,477 | 2.9 |
| 667 | (c) | 301 | ----- | 301 | 968 | (c) |
| 270 | (c) | 14 | ----- | 14 | 284 | (c) |
| 57 | (c) | ----- | ----- | ----- | 57 | (c) |
| 1,614 | .1 | 448 | ----- | 448 | 2,062 | .1 |
| 266,468 | 9.4 | 22,813 | 9,675 | 13,138 | 279,606 | 9.9 |
| 1,306 | (c) | 103 | 89 | 14 | 1,320 | (c) |
| 171 | (c) | 464 | ----- | 464 | 635 | (c) |
| 30,470 | 1.1 | 1,219 | 24 | 1,195 | 31,665 | 1.1 |
| 4,301 | .2 | 3,316 | ----- | 3,316 | 7,617 | .3 |
| 313 | (c) | ----- | ----- | ----- | 313 | (c) |
| 21,054 | .7 | 1,689 | 4,793 | b 3,104 | 17,950 | .6 |
| 118 | (c) | ----- | ----- | ----- | 118 | (c) |

awards to edu-
er contracts of
ment agencies,
awards include

* Column (b) plus or minus column (f).

b Awards to other States exceed the awards from other States.

c Less than 0.5 percent.

Source: NASA, Annual Procurement Report. Fiscal Year 1970.

NASA

- NASA subcontracts in 1970 totaled \$444 million. Of this total, \$156 million, or 35 percent, remained within the prime contract State, and \$288 million, or 65 percent, crossed State lines.
- These subcontract dollars originated from prime contracts in 22 States and the District of Columbia. However, the subcontracts were performed in 40 States and the District of Columbia.
- As a result, 31 States showed an increase in their share of procurements, and 9 States and the District of Columbia showed a decrease.
- Eight of the 9 States showing a decrease as a result of subcontracting were among the 10 largest States in terms of 1970 prime contract awards.

DOD and AEC

- Those prime contracts reported by DOD and AEC together totaled \$2,630 million, and first-tier subcontracts totaled \$1,027 million.
- Of the subcontract dollars, \$148 million, or 14 percent, remained within the prime contract State and \$880 million, or 86 percent, crossed State lines.
- As a result of subcontracting, 34 States, the District of Columbia, and Canada showed increases, and 9 States showed decreases from their prime contract totals.

(For detailed data on this section see appendix tables C-82 through C-87.)

Geographic distribution of 40 DOD and AEC prime contracts

(Dollars in thousands)

| State | Prime contract awards to State | |
|---------------------------|--------------------------------|------------------|
| | Amount | Percent of total |
| (a) | (b) | (c) |
| United States, total..... | \$2,629,947 | 100. |
| Alabama..... | | |
| Alaska..... | | |
| Arizona..... | | |
| Arkansas..... | | |
| California..... | 879,445 | 33. |
| Colorado..... | | |
| Connecticut..... | | |
| Delaware..... | | |
| District of Columbia..... | | |
| Florida..... | | |
| Georgia..... | | |
| Hawaii..... | | |
| Idaho..... | 48,100 | 1. |
| Illinois..... | 152,500 | 5. |
| Indiana..... | | |
| Iowa..... | | |
| Kansas..... | | |
| Kentucky..... | | |
| Louisiana..... | | |
| Maine..... | | |
| Maryland..... | | |
| Massachusetts..... | 55,500 | 2. |
| Michigan..... | 33,000 | 1. |
| Minnesota..... | | |
| Mississippi..... | | |
| Missouri..... | | |
| Montana..... | | |
| Nebraska..... | | |
| Nevada..... | 168,000 | 6. |
| New Hampshire..... | | |
| New Jersey..... | 314,600 | 12. |
| New Mexico..... | 357,200 | 13. |
| New York..... | 159,600 | 6. |
| North Carolina..... | | |
| North Dakota..... | | |
| Ohio..... | | |
| Oklahoma..... | | |
| Oregon..... | | |
| Pennsylvania..... | 159,900 | 6. |
| Rhode Island..... | | |
| South Carolina..... | | |
| South Dakota..... | | |
| Tennessee..... | 93,700 | 3. |
| Texas..... | 69,272 | 2. |
| Utah..... | | |
| Vermont..... | | |
| Virginia..... | | |
| Washington..... | 139,130 | 5. |
| West Virginia..... | | |
| Wisconsin..... | | |
| Wyoming..... | | |
| Canada..... | | |

^a Column (b) plus or minus (f).

^b Awards to other States exceed the awards from other States.

^c Less than .05 percent.

Source: National Science Foundation.

GEOGRAPHIC DISTRIBUTION

Geographic distribution of 40 DOD and AEC prime contracts and first-tier subcontract awards, FY 1970

[Dollars in thousands]

| State | Prime contract awards to State | | Subcontract awards | | | Net total—prime contract and subcontract awards | |
|---------------------------|--------------------------------|------------------|----------------------------|-------------------------|----------------------|---|---------------------|
| | Amount | Percent of total | Received from other States | Awarded to other States | Net Total | Amount ^a | Percent of total |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) |
| United States, total..... | \$2,629,947 | 100.0 | \$879,649 | \$879,649 | ----- | \$2,629,947 | 100.0 |
| Alabama..... | | | 10,293 | | 10,293 | 10,293 | .4 |
| Alaska..... | | | 1,016 | | 1,016 | 1,016 | (^e) .4 |
| Arizona..... | | | 9,256 | | 9,256 | 9,256 | |
| Arkansas..... | | | | | | | |
| California..... | 879,445 | 33.4 | 195,551 | 266,297 | ^b 70,746 | 808,699 | 30.7 |
| Colorado..... | | | 5,313 | | 5,313 | 5,313 | .2 |
| Connecticut..... | | | 18,955 | | 18,955 | 18,955 | .7 |
| Delaware..... | | | 179 | | 179 | 179 | (^e) |
| District of Columbia..... | | | 3,927 | | 3,927 | 3,927 | .1 |
| Florida..... | | | 77,026 | | 77,026 | 77,026 | 2.9 |
| Georgia..... | | | 930 | | 930 | 930 | (^e) |
| Hawaii..... | | | 3,500 | | 3,500 | 3,500 | .1 |
| Idaho..... | 48,100 | 1.8 | 8,231 | 8,475 | ^b 244 | 47,856 | 1.8 |
| Illinois..... | 152,500 | 5.8 | 6,915 | 25,112 | ^b 18,197 | 134,303 | 5.1 |
| Indiana..... | | | 1,178 | | 1,178 | 1,178 | (^e) |
| Iowa..... | | | 7,342 | | 7,342 | 7,342 | .3 |
| Kansas..... | | | | | | | |
| Kentucky..... | | | 1,068 | | 1,068 | 1,068 | (^e) |
| Louisiana..... | | | 157 | | 157 | 157 | (^e) |
| Maine..... | | | 1,603 | | 1,603 | 1,603 | .1 |
| Maryland..... | | | 8,433 | | 8,433 | 8,433 | .3 |
| Massachusetts..... | 55,500 | 2.1 | 49,426 | 12,016 | 37,410 | 92,910 | 3.5 |
| Michigan..... | 33,000 | 1.3 | 5,773 | 9,645 | ^b 3,872 | 29,128 | 1.1 |
| Minnesota..... | | | 70,175 | | 70,175 | 70,175 | 2.7 |
| Mississippi..... | | | 10 | | 10 | 10 | (^e) |
| Missouri..... | | | 13,226 | | 13,226 | 13,226 | .5 |
| Montana..... | | | | | | | |
| Nebraska..... | | | 1 | | 1 | 1 | (^e) |
| Nevada..... | 168,000 | 6.4 | 3,585 | 41,649 | ^b 38,064 | 129,936 | 4.9 |
| New Hampshire..... | | | 28,728 | | 28,728 | 28,728 | 1.1 |
| New Jersey..... | 314,600 | 12.0 | 16,571 | 198,300 | ^b 181,729 | 132,871 | 5.1 |
| New Mexico..... | 357,200 | 13.6 | 576 | 135,390 | ^b 134,814 | 222,386 | 8.5 |
| New York..... | 159,600 | 6.1 | 135,416 | 21,912 | 113,504 | 273,104 | 10.4 |
| North Carolina..... | | | 119 | | 119 | 119 | (^e) |
| North Dakota..... | | | | | | | |
| Ohio..... | | | 11,756 | | 11,756 | 11,756 | .4 |
| Oklahoma..... | | | 5,010 | | 5,010 | 5,010 | .2 |
| Oregon..... | | | 3,274 | | 3,274 | 3,274 | .1 |
| Pennsylvania..... | 159,900 | 6.1 | 24,099 | 55,391 | ^b 31,292 | 128,608 | 4.9 |
| Rhode Island..... | | | 451 | | 451 | 451 | (^e) |
| South Carolina..... | | | 1,131 | | 1,131 | 1,131 | (^e) |
| South Dakota..... | | | | | | | |
| Tennessee..... | 93,700 | 3.6 | 13,679 | 5,759 | 7,920 | 101,620 | 3.9 |
| Texas..... | 69,272 | 2.6 | 106,399 | 15,157 | 91,239 | 160,511 | 6.1 |
| Utah..... | | | | | 3,216 | 3,216 | .1 |
| Vermont..... | | | | | | | |
| Virginia..... | | | 10,094 | | 10,094 | 10,094 | .4 |
| Washington..... | 139,130 | 5.3 | 14,713 | 84,546 | ^b 69,833 | 69,297 | .6 |
| West Virginia..... | | | 72 | | 72 | 72 | |
| Wisconsin..... | | | 1,049 | | 1,049 | 1,049 | (^e) |
| Wyoming..... | | | | | | | |
| Canada..... | | | 230 | | 230 | 230 | (^e) |

^a Column (b) plus or minus (f).

^b Awards to other States exceed the awards from other States.

^c Less than .05 percent.

Source: National Science Foundation.

PART II

FEDERAL FUNDS
FOR SCIENTIFIC AND
TECHNICAL INFORMATION

agencies and activities

Since science moves forward on new increments of knowledge, the disclosure of research results is an essential part of the scientific process. And in the advancement of technology, new information on the state of the art is a prime necessity. However, a problem exists in effective information exchange in that the growth of science and technology has brought about an exponential growth in scientific and technical information. To aid in managing this problem scientific and technical information (STINFO) costs incurred by Federal agencies have been measured and reported by broad functions since 1960.

DEFINITIONS AND LIMITATIONS

- STINFO is defined as knowledge or data arising from the conduct of research and development, or knowledge or data required for organizing, administering, or performing research and development. Such information was used largely by scientists and engineers engaged in R&D activities.
- STINFO definitions embrace various categories of activity, beginning with the editing and preparation of scientific or technical reports, publication and continuing into various dissemination, collection, and information activities. Categories also include management and R&D work in the scientific information field. The latter category directly overlaps with R&D activities reported in part I of this survey. (See technical notes.)

THE CURRENT PERIOD

The table below depicts changes in the level of

Federal obligations for scientific and technical information

| Agency |
|--|
| Total..... |
| Department of Defense..... |
| Department of Health, Education, and Welfare..... |
| Department of Commerce..... |
| National Aeronautics and Space Administration..... |
| Library of Congress..... |
| National Science Foundation..... |
| Department of the Interior..... |
| Other agencies..... |

Agencies Activities

new increments
of research results
scientific process. And
new information
prime necessity.
active information
th of science and
ponential growth
mation. To aid in
ific and technical
curred by Federal
and reported by
ions since 1960.

DEFINITIONS AND LIMITATIONS

- STINFO is defined as knowledge or data resulting from the conduct of research and development, or knowledge or data required for organizing, administering, or performing research and development. Such information would be used largely by scientists and engineers engaged in R&D activities.
- STINFO definitions embrace various categories of activity, beginning with the editing and preparation of scientific or technical reports for publication and continuing into various documentation, collection, and information service activities. Categories also include meetings and R&D work in the scientific information area. The latter category directly overlaps with the R&D activities reported in part I of this survey. (See technical notes.)
- The data on STINFO in **Federal Funds** surveys cover only **direct** STINFO activities of Federal agencies, not STINFO activities conducted within R&D contracts and grants. Those extramural costs reported are for STINFO services contracted by Federal agencies (to administer a specialized information center, perform printing and distributing, do abstracting, etc.) or agency grants for special STINFO—connected studies.
- Despite this limitation, the broad measurement of direct costs on a functional basis can be useful as a guide to planning and forecasting.

THE CURRENT PERIOD

The table below depicts changes in the level of STINFO support in the current budget period.

Federal obligations for scientific and technical information, by agency

[Dollars in millions]

| Agency | Actual | | | Estimates | | | |
|--|---------|---------|------------------------|-----------|------------------------|---------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total..... | \$362.5 | \$386.8 | +6.7 | \$400.4 | +3.5 | \$413.0 | +3.2 |
| Department of Defense..... | 147.2 | 145.2 | -1.4 | 147.3 | +1.4 | 150.0 | +1.8 |
| Department of Health, Education, and Welfare..... | 64.8 | 66.0 | +1.9 | 72.4 | +9.6 | 67.9 | -6.2 |
| Department of Commerce..... | 52.1 | 60.3 | +15.7 | 68.4 | +13.4 | 71.9 | +5.0 |
| National Aeronautics and Space Administration..... | 27.7 | 26.5 | -4.3 | 26.9 | +1.3 | 27.9 | +3.7 |
| Library of Congress..... | 19.8 | 22.1 | +11.6 | 23.0 | +4.1 | 32.4 | +41.1 |
| National Science Foundation..... | 12.3 | 14.9 | +21.1 | 15.0 | +1.2 | 12.6 | -16.3 |
| Department of the Interior..... | 12.9 | 12.7 | -1.6 | 13.6 | +6.7 | 14.0 | +3.2 |
| Other agencies..... | 25.7 | 39.1 | +52.1 | 33.8 | -13.6 | 36.3 | +7.4 |

- Between 1969 and 1972 overall net growth in STINFO activities is expected to be 14 percent. The greatest annual increase occurred between 1969 and 1970.

- In 1970 Commerce and NSF were the only leading support agencies to register important relative increases, but the other agencies, taken as a group, substantially increased their STINFO activities.

- For Commerce the growth in 1970 largely arose from expansion in the Patent Office and the National Bureau of Standards; this expansion continued in 1971 in the case of the Patent Office.

- For NSF the growth in 1970 was primarily in the translation area, much of it supported by excess foreign currencies, and, secondarily, in the area of research and development on information services for individual scientists and for improvement of discipline-oriented information systems useful in applied research.

- Between 1970 and 1971 and between 1971 and 1972 growth in total STINFO obligations was moderate and was caused by increases on the part of most of the agencies.

- In 1972 the only relatively large increase is scheduled by the Library of Congress. This increase consists chiefly of a requested direct appropriation to the Library for the National Program for Acquisitions and Cataloging (NPAC), formerly appropriated to HEW under the Higher Education Act (Title IIC).

TRENDS

The following tabulation shows the chronology of STINFO

Trends in Federal obligations for scientific and technical information

(Dollars in millions)

| Year | Total | Publication and distribution | Documentation, reference, and information services |
|------------------|---------|------------------------------|--|
| 1960..... | \$ 75.9 | \$ 37.0 | \$ 28.9 |
| 1961..... | 91.6 | 48.7 | 29.9 |
| 1962..... | 128.5 | 55.7 | 42.9 |
| 1963..... | 164.5 | 67.7 | 64.9 |
| 1964..... | * 203.2 | 59.9 | 90.9 |
| 1965..... | 224.7 | 68.2 | 102.9 |
| 1966..... | 277.7 | 82.7 | 124.9 |
| 1967..... | 324.4 | 87.1 | 152.9 |
| 1968..... | 359.2 | 100.7 | 165.9 |
| 1969..... | 362.5 | 96.0 | 170.9 |
| 1970..... | 386.8 | 98.9 | 193.9 |
| 1971 (est.)..... | 400.4 | 107.1 | 190.9 |
| 1972 (est.)..... | 413.0 | 110.7 | 191.9 |

* Includes \$17.2 million for management, which was reported separately from other categories in 1964.

- Between 1960 and 1972 Federal obligations for STINFO activities grew more than five times.

- During this period the chief dollar growth area has been that of documentation, reference, and information services; this category grew almost seven times and in 1972 is expected to account for 46 percent of the STINFO total.

- The share of publication and distribution will have fallen to an estimated 27 percent of the 1972 total (from 49 percent in 1960). Nonetheless, dollar growth in this category has been impressive.

SCIENTIFIC AND TECHNICAL INFORMATION

TRENDS

The following tabulation shows the chronology of STINFO funding:

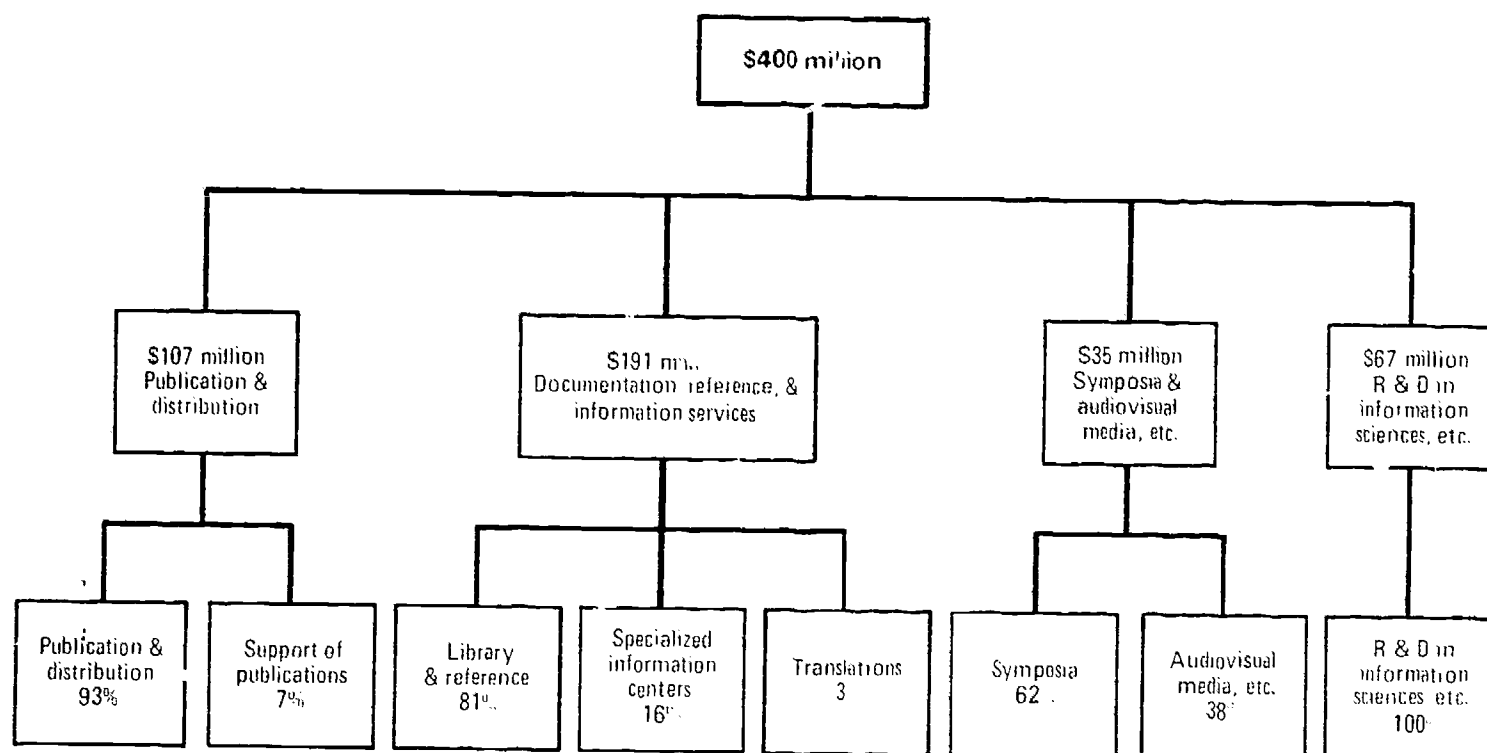
Trends in Federal obligations for scientific and technical information activities, by major categories
[Dollars in millions]

| Year | Total | Publication and distribution | Documentation, reference and information services | Symposia and audiovisual media | R&D in information sciences, documentation and information systems, techniques and devices |
|------------------|---------|------------------------------|---|--------------------------------|--|
| 1960..... | \$ 75.9 | \$ 37.0 | \$ 28.4 | \$ 7.6 | \$ 2.9 |
| 1961..... | 91.6 | 48.7 | 29.0 | 6.7 | 7.2 |
| 1962..... | 128.5 | 55.7 | 42.4 | 17.0 | 13.3 |
| 1963..... | 164.5 | 67.7 | 64.0 | 21.0 | 11.9 |
| 1964..... | * 203.2 | 59.9 | 90.8 | 22.7 | 12.6 |
| 1965..... | 224.7 | 68.2 | 102.0 | 32.0 | 22.5 |
| 1966..... | 277.7 | 82.7 | 124.6 | 22.5 | 48.0 |
| 1967..... | 324.4 | 87.1 | 152.5 | 31.7 | 53.1 |
| 1968..... | 359.2 | 100.7 | 165.6 | 34.1 | 58.8 |
| 1969..... | 362.5 | 96.0 | 170.9 | 31.8 | 63.7 |
| 1970..... | 386.8 | 98.9 | 193.1 | 32.6 | 62.1 |
| 1971 (est.)..... | 400.4 | 107.1 | 190.5 | 35.3 | 67.5 |
| 1972 (est.)..... | 413.0 | 110.7 | 191.2 | 36.7 | 74.4 |

* Includes \$17.2 million for management, which was reported separately from other categories in 1964 only.

- Between 1960 and 1972 Federal obligations for STINFO activities grew more than five times.
- Obligations for symposia and audiovisual media, 9 percent of the total in 1972, increased rapidly in the first half of the 1960's, then leveled off and are now growing moderately.
- During this period the chief dollar growth area has been that of documentation, reference, and information services; this category grew almost seven times and in 1972 is expected to account for 46 percent of the STINFO total.
- Obligations for research and development in information, 18 percent of the 1972 total, show the most rapid rate of growth of any category between 1960 and 1972 with strong gains in the current budget period.
- The share of publication and distribution will have fallen to an estimated 27 percent of the 1972 total (from 49 percent in 1960). Nonetheless, dollar growth in this category has been impressive.
- Total STINFO obligations in 1972 are expected to be equal to 2½ percent of the total Federal R&D obligations.

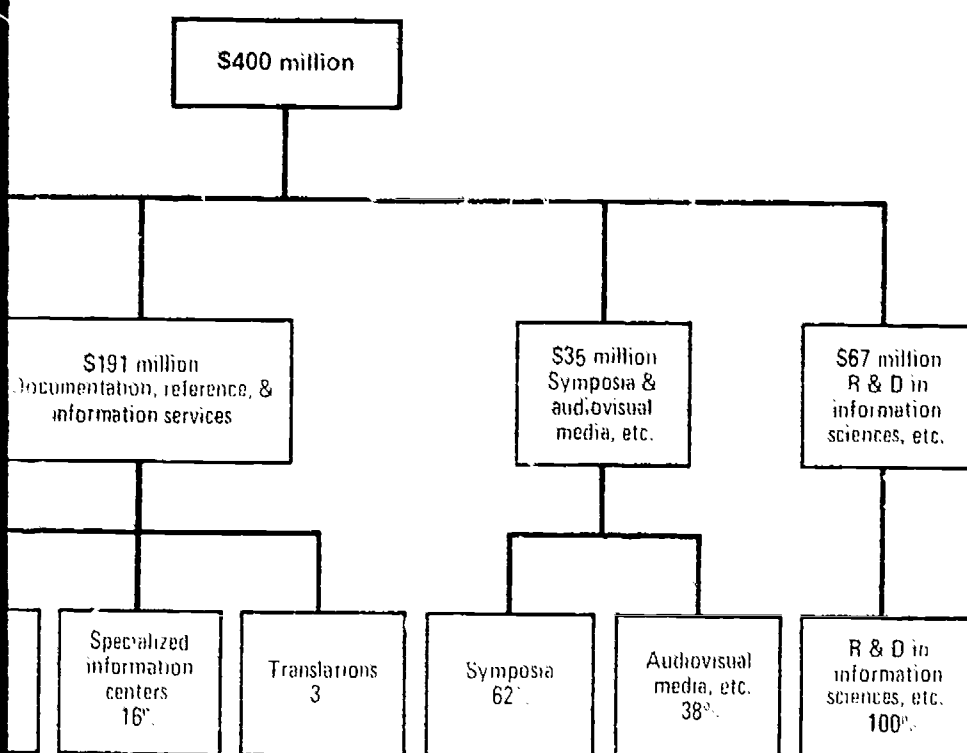
Federal obligations for scientific and technical information, by activity, FY 1971 (est.)



SOURCE: National Science Foundation

- Under each major category one subcategory represents most of the costs, and this pattern has been consistent throughout the 1960–72 period.
- For publication and distribution in 1971 more than 9 out of 10 dollars are allocated to direct costs of this function.
- For documentation, reference, and information services, library and reference accounts for four out of five dollars.
- Under symposia and audiovisual media, symposia and technical meetings use more than three out of five dollars.

and technical information, by activity, FY 1971 (est.)



- Under each major category one subcategory represents most of the costs, and this pattern has been consistent throughout the 1960-72 period.
- For publication and distribution in 1971 more than 9 out of 10 dollars are allocated to direct costs of this function.
- For documentation, reference, and information services, library and reference accounts for four out of five dollars.
- Under symposia and audiovisual media, symposia and technical meetings use more than three out of five dollars.

AGENCIES

- In 1971, although 25 agencies reported STINFO activities, the leading 11 account for more than 97 percent of the total dollars obligated.
- STINFO costs are not wholly comparable between agencies; some agencies have full reporting systems while others lack the means for determining all their STINFO costs. In the 1970-72 period, 3 agencies reported no STINFO obligations despite reporting R&D programs. In some cases agencies cannot identify STINFO costs; in others, all such costs are incurred within extramural R&D contracts and grants.
- The ratio of STINFO obligations to an agency's R&D obligations varies widely from agency to agency. Only in some cases do STINFO efforts bear a direct relationship to an agency's R&D work. They often represent independent services, such as those of the Patent Office within Commerce, the National Agricultural Library, or the STINFO part of the Library of Congress.
- DOD, HEW, and Commerce together account for almost three-fourths of the STINFO total in 1971.
- DOD is responsible for 37 percent of total Federal STINFO obligations in 1971, as much a reflection of the Army's full STINFO reporting systems as any other factor. (Although Navy and Air Force R&D programs are larger than those of the Army, their reported STINFO totals are lower.)
- HEW represents 18 percent of the Federal STINFO total in 1971; more than one-half of this effort is in the National Institutes of Health, much of it in the National Library of Medicine.
- The 17 percent accounted for by Commerce is chiefly centered in the Patent Office.

Distribution of Federal obligations for scientific and technical information, by agency and subdivision, FY 1971 (est.)

(Dollars in millions)

| Agency and subdivision | Total obligations | Percent share |
|---|-------------------|---------------|
| Total, all agencies..... | \$400.4 | 100.0 |
| Department of Defense..... | 147.3 | 36.8 |
| Department of the Army..... | 69.8 | 17.4 |
| Department of the Air Force..... | 18.5 | 4.6 |
| Department of the Navy..... | 16.2 | 4.1 |
| Defense Agencies..... | 42.7 | 10.7 |
| Department of Health, Education, and Welfare..... | 72.4 | 18.1 |
| National Institutes of Health..... | 40.1 | 10.0 |
| (National Library of Medicine)..... | (22.9) | (5.7) |
| Office of Education..... | 17.6 | 4.4 |
| Health Services and Mental Health Administration..... | 8.9 | 2.2 |
| Food and Drug Administration..... | 5.4 | 1.3 |
| Social Security Administration..... | .3 | .1 |
| Department of Commerce..... | 58.4 | 17.1 |
| Patent Office..... | 52.6 | 13.1 |
| National Bureau of Standards..... | 11.2 | 2.8 |
| National Oceanic and Atmospheric Administration..... | 3.9 | 1.0 |
| Other..... | .7 | .2 |
| National Aeronautics and Space Administration..... | 26.9 | 6.7 |
| Library of Congress..... | 23.0 | 5.7 |
| National Science Foundation..... | 15.0 | 3.7 |
| Department of the Interior..... | 13.6 | 3.4 |
| Geological Survey..... | 9.5 | 2.4 |
| Other..... | 4.0 | 1.0 |
| Department of Agriculture..... | 10.7 | 2.7 |
| National Agricultural Library..... | 4.1 | 1.0 |
| Agricultural Research Service..... | 3.4 | .8 |
| Forest Service..... | 2.7 | .7 |
| Other..... | .6 | .1 |
| Veterans Administration..... | 6.1 | 1.5 |
| Atomic Energy Commission..... | 4.9 | 1.2 |
| Department of Transportation..... | 3.9 | 1.0 |
| Other agencies..... | 5.2 | 2.0 |

- NASA and AEC, despite large overall R&D programs, report comparatively small amounts for STINFO purposes because so much of their R&D work, including STINFO activities connected therewith, is performed extramurally.

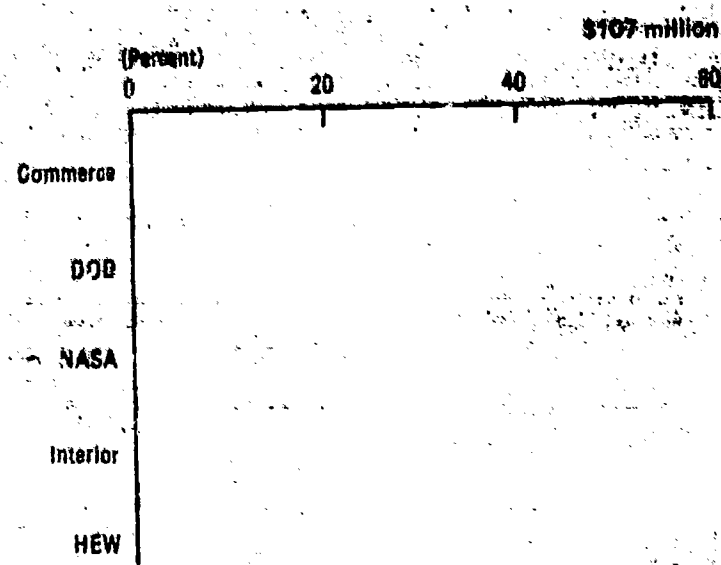
ACTIVITIES

- Certain agencies tend to be predominant in certain categories of activity: DOD in all four major ones and HEW in three out of four while Commerce is predominant in only one.
- Often an agency will initiate STINFO activities in one category, or subcategory, and as its R&D programs grow, extend into the other categories. STINFO functions tend to flow back and forth between categories.

Key agency activities within each of the categories are listed below.

Share of selected agencies in major categories of STINFO activity, FY 1971 (est.)

Category 1. Publication and distribution



SOURCE: National Science Foundation

COMMERCE: Patent Office

80,000 patents in FY 1971

Official Gazette, weekly abstracts of current patents

DOD: Departments of the Army, Navy, and Air Force

Journal articles

Technical reports

Technical notes

Technical memorandums

Contractors' and grantees' reports

Research reviews

Research bulletins

Research reports

Newsletters

ific and
vision,

| | Percent share |
|--|---------------|
| | 100.0 |
| | 36.8 |
| | 17.4 |
| | 4.6 |
| | 4.1 |
| | 10.7 |
| | 18.1 |
| | 10.0 |
| | (5.7) |
| | 4.4 |
| | 2.2 |
| | 1.3 |
| | .1 |
| | 17.1 |
| | 13.1 |
| | 2.8 |
| | 1.0 |
| | .2 |
| | 6.7 |
| | 5.7 |
| | 3.7 |
| | 3.4 |
| | 2.4 |
| | 1.0 |
| | 2.7 |
| | 1.0 |
| | .8 |
| | .7 |
| | .1 |
| | 1.5 |
| | 1.2 |
| | 1.0 |
| | 2.0 |

R&D pro-
mounts for
h of their
ivities con-
murally.



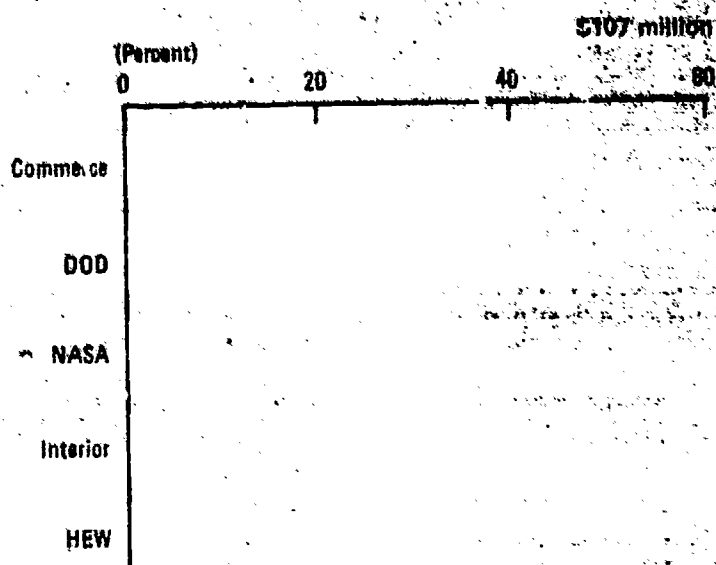
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80,000 patents in FY 1971

Official Gazette, weekly abstracts of current patents

DOD: Departments of the Army, Navy, and Air Force

Journal articles
Technical reports
Technical notes
Technical memorandums
Contractors' and grantees' reports
Research reviews
Research bulletins
Research reports
Newsletters

SCIENTIFIC AND TECHNICAL INFORMATION

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Conference proceedings
Scientific and Technical Abstracts (STAR)
International Aerospace Abstracts
Indexes
Bibliographies
Technical reprints
Special publications

INTERIOR: Geological Survey

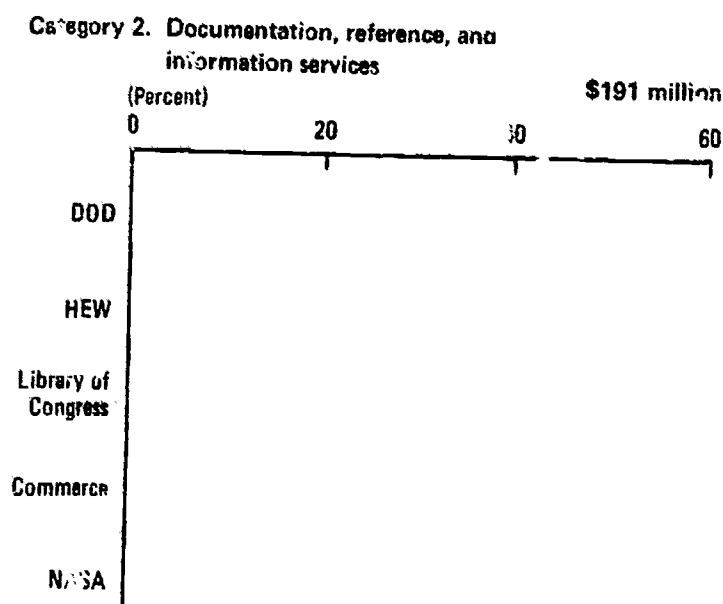
Books
Maps
Charts
Atlases
Research summaries
Journal articles
Bibliography of North American Geology
Geophysical Abstracts

HEW: National Institutes of Health

Journals of the institutes
Journal articles
Indexes
Bibliographies
Abstracts
Monographs
Books
Reports
Health Services and Mental Health
Administration
Scientific and technical papers
Manuals
Reviews and analyses
Journal articles
Office of Education
Research in Education

AEC

Technical reports
Progress reports
Summary reports
Topical reports
Journal articles
Proceedings of meetings
Nuclear Science Abstracts
Progress reviews
Books
Monographs
Bibliographies



SOURCE: National Science Foundation

DOD: Defense Agencies

Defense Documentation Center
Departments of the Army, Navy, and Air Force
Libraries
Specialized information centers
Technical information analysis centers
Translations

HEW: National Institutes of Health

National Library of Medicine
Specialized information centers
Translations
Office of Education
ERIC system of 20 information clearinghouses in education research

Food and Drug Administration

Specialized information centers

LIBRARY OF CONGRESS

Science and technology portion

COMMERCE: Patent Office

Search Room

National Bureau of Standards

National Technical Information Service (NTIS)
National Standard Reference Data System (NSRDS)

NASA

STI documentation facility
Headquarters and field center libraries
Specialized information centers
Regional dissemination centers
Translations

NSF

Support of abstracting, indexing, and other documentation services

USDA

National Agricultural Library

VA

Medical library services in 165 hospitals

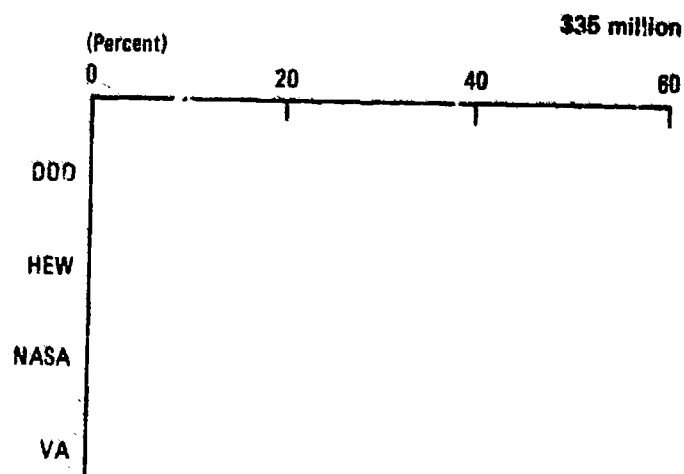
AEC

Abstract and review preparation

SMITHSONIAN

Science Information Exchange

Category 3. Symposia and audiovisual media



SOURCE: National Science Foundation

DOD: Departments of the Army, Navy, and Air Force

Science conferences
Support of symposia with professional groups, scientific societies, and educational institutions
Motion pictures
Slides
Video tapes
Exhibits

HEW: National Institutes of Health

Travel to scientific meetings, U.S. and abroad
Support of conferences and symposia
Support of international congresses
Sound films on body functions, diseases, and treatment
TV interviews
Slides
Photographs
Exhibits

NASA

Participation in and support of scientific symposia and technical meetings

VA

Participation in seminars and symposia
Films
Slides

NSF

Support of abstracting, indexing, and other documentation services

USDA

National Agricultural Library

VA

Medical library services in 165 hospitals

AEC

Abstract and review preparation

SMITHSONIAN

Science Information Exchange

\$191 million

60

Category 3. Symposia and audiovisual media

\$35 million

(Percent)

0 20 40 60

DOD

HEW

NASA

VA

SOURCE: National Science Foundation

DOD: Departments of the Army, Navy, and Air Force

Science conferences

Support of symposia with professional groups, scientific societies, and educational institutions

Motion pictures

Slides

Video tapes

Exhibits

HEW: National Institutes of Health

Travel to scientific meetings, U.S. and abroad

Support of conferences and symposia

Support of international congresses

Sound films on body functions, diseases, and treatment

TV interviews

Slides

Photographs

Exhibits

NASA

Participation in and support of scientific symposia and technical meetings

VA

Participation in seminars and symposia

Films

Slides

Category 4. Research and development in information sciences, documentation and information systems, techniques, and devices

\$67 million

(Percent)

0 20 40 60

DOD

HEW

NSF

SOURCE: National Science Foundation

DOD: Defense Agencies (largely ARPA)

Departments of the Army, Navy, and Air Force

R&D in advanced information systems

Development of engineering data systems

Support of development of discipline-based information systems

Studies of man-computer relationships (Project Mack)

Basic research in information sciences

HEW: National Institutes of Health (including NLM)

Improvement of MEDLARS system at NLM

Development of mechanized searching services in the institutes

Development of computer time-sharing techniques

Health Services and Mental Health Administration

Improvement of information systems

Office of Education

Bibliographic automation of large library operations

Development of an automated instructional materials-handling program

NSF

Support of systems development:

discipline-oriented

university-centered

national systems planning

Research support to:

research centers in information science

individual research projects

(For detailed data on this section see appendix tables D-1 through D-9.)

PART III

FEDERAL FUNDS
FOR COLLECTION OF
GENERAL-PURPOSE
SCIENTIFIC DATA

agencies and activities

General-purpose scientific data are those which, either separately or in combination with other information, can be applied to useful, general scientific purposes. Included as general-purpose scientific data are statistics, observations, specimens, readings, or other facts gathered from surveys, field investigations, or compilations of operating records, and similar types of information. Excluded are data used solely for internal administrative or operating purposes. General-purpose scientific data may pertain to the physical, life, mathematical, engineering, and environmental sciences as well as to the psychological and social sciences. These data are used by many organizations and individuals, including public agencies—Federal, State, and local—private foundations or associations, research investigators, and the general public.

THE CURRENT PERIOD

Federal obligations for collection of general-purpose scientific data are as follows:

Federal obligations for collection of general-purpose scientific data
[Dollars in millions]

| Agency | 1969 |
|----------------------------------|---------|
| Total | \$3,100 |
| Department of Commerce | 1,100 |
| Department of Defense | 1,000 |
| Department of the Interior | 500 |
| Department of Agriculture | 400 |
| Other agencies | 100 |

- Obligations for general-purpose scientific data were reported by 11 departments and 10 independent agencies.
- Unlike Federal R&D programs, those involving general-purpose scientific data collection have been predominantly carried out by Federal personnel. In the current (1970–72) period 97 percent of the work in such data collection is expected to be performed intramurally whereas only 25 percent of the Federal R&D total is directed to intramural performance.
- More than four-fifths of total obligations for the current years were reported by four agencies—Commerce, DOD, Interior, and USDA.
- However, the largest effort, that of Commerce, reflects a declining share in this period—from 57 percent of the total in 1970 to 50 percent in 1972.

THE CURRENT PERIOD

Federal obligations for collection of general-purpose scientific data in the current period are shown as follows:

Federal obligations for collection of general-purpose scientific data, by agency

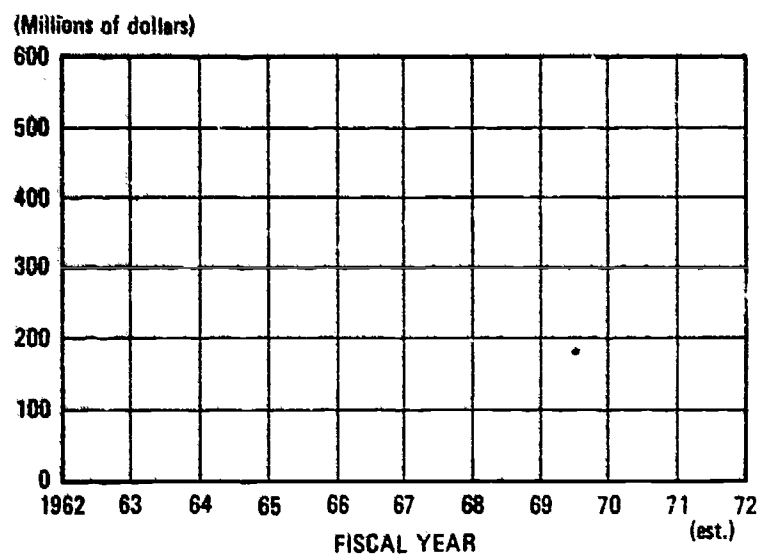
(Dollars in millions)

| Agency | Actual | | | Estimates | | | |
|---------------------------------|--------|-------|------------------------|-----------|------------------------|-------|------------------------|
| | 1969 | 1970 | Percent change 1969-70 | 1971 | Percent change 1970-71 | 1972 | Percent change 1971-72 |
| Total | \$385 | \$550 | +42.9 | \$526 | -4.4 | \$537 | +2.1 |
| Department of Commerce..... | 181 | 311 | +71.8 | 274 | -12.0 | 266 | -2.9 |
| Department of Defense..... | 57 | 67 | +17.5 | 64 | -5.2 | 69 | +8.3 |
| Department of the Interior..... | 48 | 51 | +6.3 | 54 | +6.3 | 56 | +4.5 |
| Department of Agriculture..... | 35 | 42 | +20.0 | 44 | +4.9 | 44 | -0.2 |
| Other agencies..... | 63 | 79 | +25.4 | 90 | +14.6 | 101 | +12.6 |

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- However, the largest effort, that of Commerce, reflects a declining share in this period—from 57 percent of the total in 1970 to 50 percent in 1972.

- From 1969 to 1970 Commerce obligations rose more than 70 percent and then declined in 1971 and 1972. This fluctuation is due primarily to costs of the 1970 decennial census of population and housing, conducted by the Bureau of the Census.
- The funding fluctuation for Commerce would have even been greater except for the substantial increases in obligations on the part of NOAA in 1971 and 1972.
- DOD is the agency reporting the second largest obligations. Year-to-year variations in funds for data-collection equipment, especially ships for the Navy, are the primary cause of shifting levels for DOD when they occur.

Trends in Federal obligations for collection of general-purpose scientific data, FY 1962-1972 (est.)



| Year | Obligations (Millions of dollars) | Annual percent change |
|-------------|--------------------------------------|--------------------------|
| 1962 | \$220 | -- |
| 1963 | 268 | 22 |
| 1964 | 309 | 15 |
| 1965 | 343 | 11 |
| 1966 | 325 | -5 |
| 1967 | 368 | 13 |
| 1968 | 380 | 3 |
| 1969 | 385 | 1 |
| 1970 | 550 | 43 |
| 1971 (est.) | 526 | -4 |
| 1972 (est.) | 537 | 2 |

SOURCE: National Science Foundation

TRENDS

- Total data collection obligations multiplied about $2\frac{1}{2}$ times in the 1962-72 decade,¹ compared with slightly more than $1\frac{1}{2}$ times for R&D obligations.
- Between 1962 and 1965, obligations registered an average annual growth rate of 16 percent, but between 1965 and 1969 this increase slowed to 3 percent. In 1970, the increase was 43 percent and it was influenced chiefly by

¹ The first year in which obligational data were reported by agencies on the collection of general-purpose scientific data was 1962.

costs of the 1970 decennial census. In 1971 and 1972 changes were slight.

- Despite the substantial drop in the Census Bureau's 1971 and 1972 obligations as a result of completion of the decennial census, the overall Federal totals estimated for 1971 and 1972 are almost as high as 1970. Increased support by other agency subdivisions, primarily NOAA within Commerce, the Bureau of Labor Statistics within Labor, the Geological Survey within Interior, and the Federal Aviation Administration within DOT is expected to account for these levels.

AGENCIES

- Of the four leading agencies, DOD has shown the largest relative increase during the 1962-72 decade, having more than quadrupled its total. In comparison, Commerce obligations nearly tripled, while the Interior total almost doubled. USDA had the smallest absolute and relative increase, its data collection obligations rising by about one-half between 1962 and 1972.
- Commerce has had the largest program throughout the 1962-72 period. From 1962 to 1968, this agency accounted for approximately 40 percent of the total. In 1964 its share increased to 47 percent, and then to 57 percent in 1970. The share is expected to be about 50 percent in 1971 and 1972.
- The newly organized NOAA is expected to account for four-fifths of the Commerce total in 1972, and 40 percent of the all-agency total. Its chief component is the former Environmental Science Services Administration (ESSA).
- NOAA collects natural phenomena data used for weather forecasting, flood and navigation

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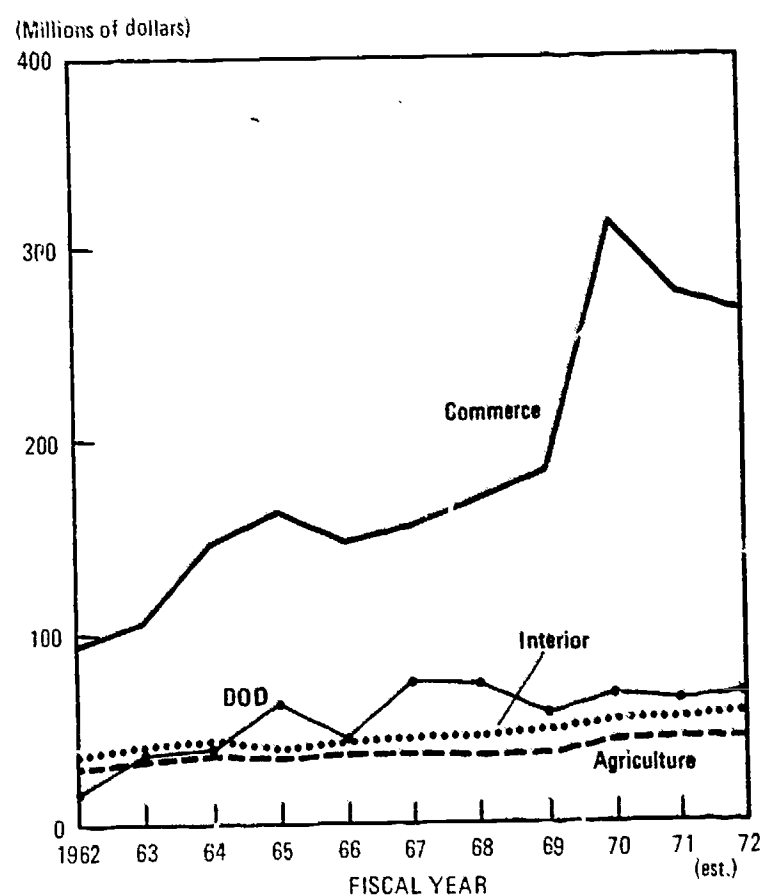
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- NOAA collects natural phenomena data used for weather forecasting, flood and navigation

GENERAL-PURPOSE SCIENTIFIC DATA

Federal obligations for collection of general-purpose scientific data, by agency, FY 1962-1972 (est.)



SOURCE: National Science Foundation

control, pollution checks, mapping, and other activities.

- The Census Bureau accounts for the remaining Commerce obligations. Census gathers data on industry, agriculture, transportation, construction and housing, population, and other social phenomena.
- Since 1965 DOD has reported the second largest data collection effort. The Navy accounts for more than 90 percent of the DOD total, and the Army Corps of Engineers makes up the remainder.
- Navy data collection activities cover hydrographic, oceanographic, and aeronautical information collected by ships, airplanes, satellites, and buoys.

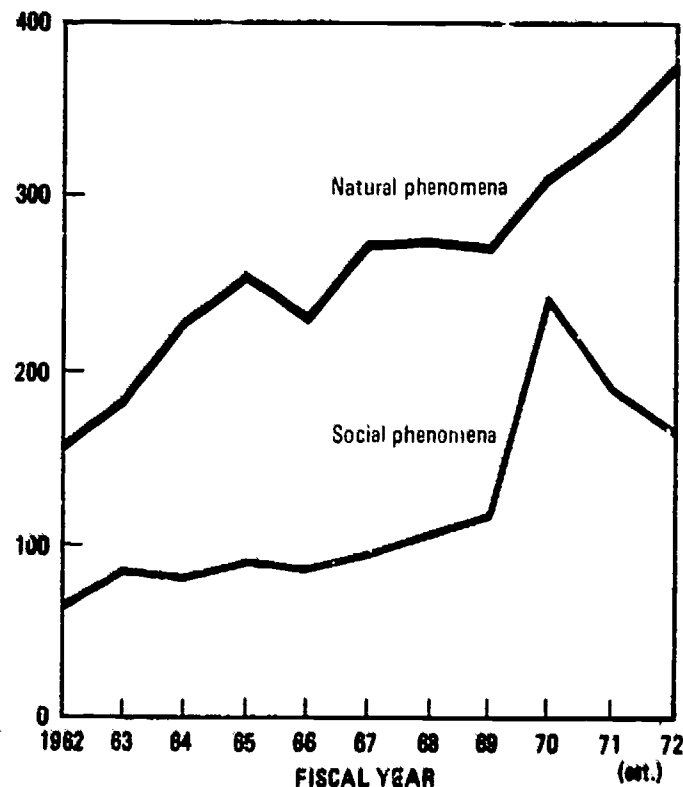
- For Interior, currently the third agency in size of effort, approximately 90 percent of the obligations are represented by one subdivision, the Geological Survey. This subdivision's data collection efforts relate to natural phenomena data covering (1) the preparation of topographic, geologic, and hydrologic maps, (2) an inventory of national water resources and water problem areas, and (3) the classification of Federal lands as to their mineral and water-power potential.
- Within USDA, fourth agency in size of obligations, the Soil Conservation Service and the Statistical Reporting Service conduct virtually all the department's data collection programs. These cover soil and snow surveys, plant adaptability testing, land use, crop production, value of farm commodities and livestock, and other agricultural statistics.
- Four other agency subdivisions (Labor's Bureau of Labor Statistics, HEW's Health Services and Mental Health Administration, DOT's Federal Aviation Administration and U.S. Coast Guard) support important scientific data collection efforts. Their combined share of the Federal total rose from 9 percent in 1970 to an estimated 13 percent for 1972.

TYPES OF DATA

- About 70 percent of the Federal data collection effort has been in the natural phenomena area throughout the 1962-72 decade, with the exception of 1970 and 1971.
- Social phenomena has accounted for the remaining portion. The share reached high points of 44 percent and 36 percent, respectively, in 1970 and 1971 as a result of costs of programs carried out by the Bureau of the Census, all of which are classified as social phenomena.

Federal obligations for collection of general-purpose scientific data, by type of data, FY 1962-1972 (est.)

(Millions of dollars)

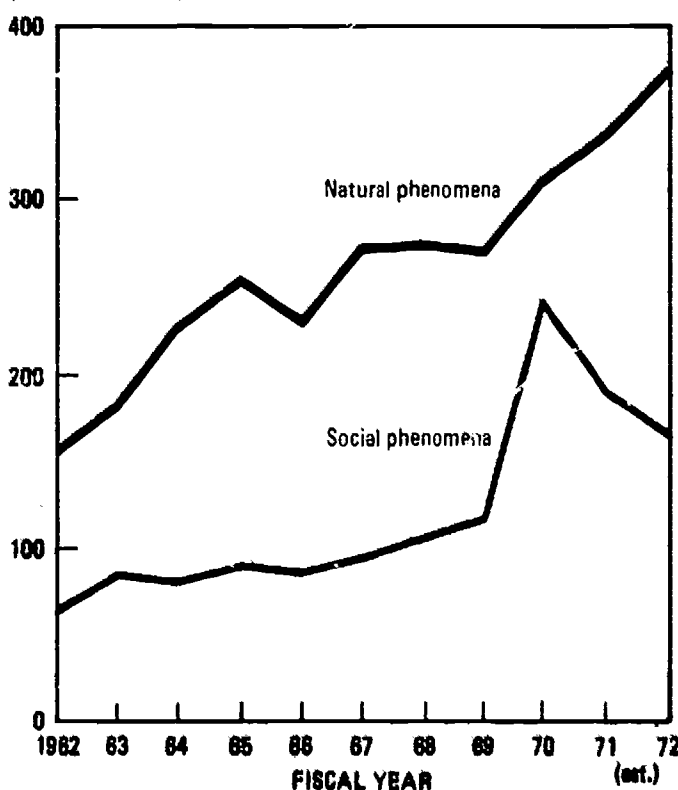


SOURCE: National Science Foundation

- Natural phenomena data are concerned with the engineering, environmental, life, mathematical, physical, and psychological sciences. Examples of activities under this heading are precipitation and other weather phenomena studies, stream flow and temperature measurements, soil and snowpack observations, topographic and oceanographic mapping work.
- Social phenomena data are of a socioeconomic nature and include population and demographic statistics, employment characteristics, industrial and agricultural production data, or crime statistics.

Federal obligations for collection of general-purpose scientific data, by type of data, FY 1962-1972 (est.)

(Millions of dollars)



SOURCE: National Science Foundation

- Natural phenomena data are concerned with the engineering, environmental, life, mathematical, physical, and psychological sciences. Examples of activities under this heading are precipitation and other weather phenomena studies, stream flow and temperature measurements, soil and snowpack observations, topographic and oceanographic mapping work.
- Social phenomena data are of a socioeconomic nature and include population and demographic statistics, employment characteristics, industrial and agricultural production data, or crime statistics.

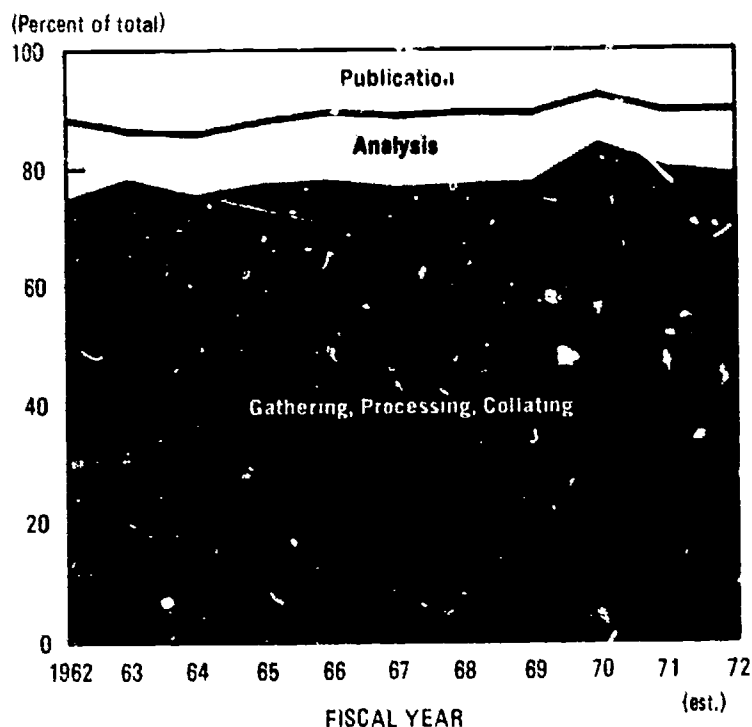
- Many more agencies report obligations for social phenomena data than for natural phenomena. Nineteen agencies reported funds for social phenomena in 1971, compared with 9 for natural phenomena.
- However, the collection of natural phenomena data is generally more expensive because it involves complex and costly equipment—aircraft, ships, earth satellites, and oceanographic instruments—and collection takes place over a wide geographic area.
- Social phenomena data, in contrast, are usually gathered through mail surveys, reports, compilations of operating records, and other less expensive methods.

ACTIVITIES

- Throughout the 1962-72 decade, the distribution of data-collection funds by category of activity² has changed relatively little.
- From 58 percent to 72 percent of the obligation total has gone for category 1 (gathering, processing, and collating) activities. The 1970 high primarily reflects the increased data collection activities for the 1970 decennial census.
- Category 4 (equipment) in the current period accounts for the second highest share of total funds (11 percent to 12 percent), but its share has dropped since 1967 and 1968 when it was 18 percent to 19 percent. This change is due largely to reductions in equipment funding by NOAA (formerly ESSA).

² The four categories of activity cover the processes involved in obtaining the data and making them available to the various users. Data are first gathered, processed, and collated (category 1) before any analysis (category 2) can be made. Then the data may be published (category 3) for use by any of the various organizations or individuals who have need for them. Category 4 (equipment) covers the procurement or rental of equipment used in the gathering, processing, or collating of the data. The four categories are not involved in every agency's general-purpose scientific data collection activities. Some agencies, particularly those that concentrate on social phenomena data, do not use equipment in the gathering of the data, and others may make no analysis of the collected data.

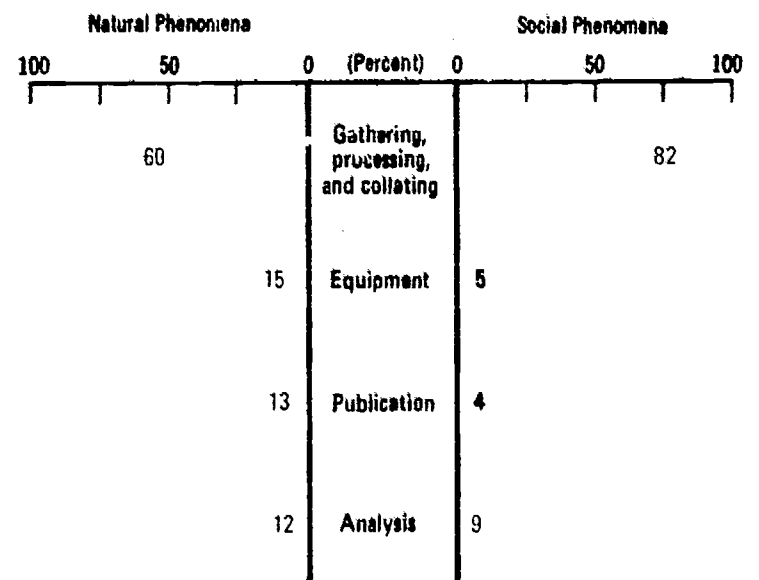
Federal obligations for collection of general-purpose scientific data, by activity, FY 1962-1972 (est.)



SOURCE: National Science Foundation

- Equipment accounts for a greater share of funds under natural phenomena than social phenomena because of the need for expensive data collection apparatus such as ships, satellites, aircraft, and specialized instrumentation in the measuring of natural phenomena.
- Conversely, the category of gathering, processing, and collating statistics accounts for a greater share of social phenomena funds than of natural phenomena funds.
- Analysis (category 2) is currently third in size of total funding after equipment. The share of social phenomena funds allotted to analysis in 1970 and 1971 was smaller than in previous years, not because of decreased funding but because the gathering, processing, and collating occasioned by the decennial census increased the share for category 1 relative to other categories.

Federal obligations for collection of general-purpose scientific data, by activity and type of data, FY 1971 (est.)



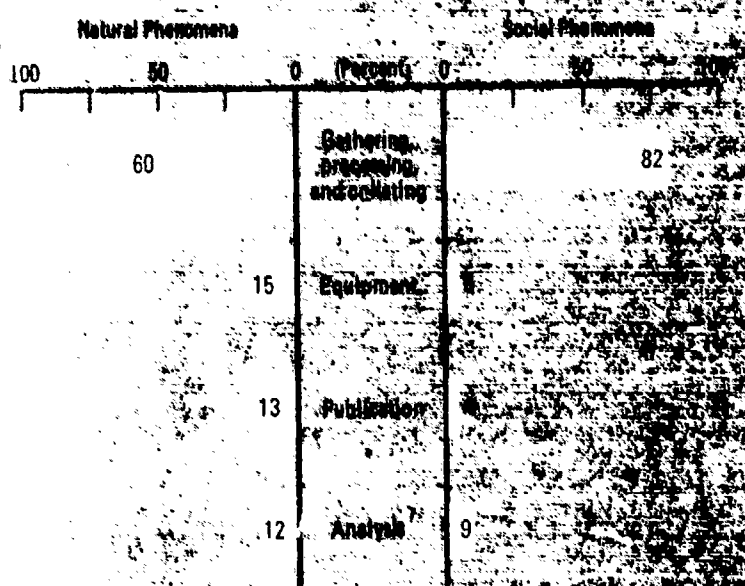
SOURCE: National Science Foundation

- In 1971 publication (category 3) is the fourth in size of funding. Approximately 88 percent of the support for this category was provided by three agency subdivisions—NOAA, the Navy, and the Geological Survey—all of whose programs dealt with natural phenomena.

(For detailed data on this section see appendix tables E-1 through E-6.)

GENERAL-PURPOSE SCIENTIFIC DATA

**Federal obligations for collection of
general-purpose scientific data, by activity
and type of data, FY 1971 (est.)**



SOURCE: National Science Foundation

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(For detailed data on this section see appendix tables E-1 through E-6.)

APPENDIXES

- A. Technical Notes
- B. Federally Funded Research
and Development Centers
- C. Statistical Tables, Part I
- D. Statistical Tables, Part II
- E. Statistical Tables, Part III

SCOPE AND METHOD

This report is organized in three parts: part I is concerned with Federal funds for research, development, and R&D plant; part II reports on funds for activities connected with the collection and dissemination of scientific and technical information; and part III covers funds obligated for the collection of general-purpose scientific data.

The statistical data contained in this report were received from Federal agencies during March-May 1971 in response to a questionnaire formulated and distributed by the Foundation in December 1970. The Foundation's staff assisted the agency respondents in the interpretation of the survey's concepts and definitions and evaluated the responses for clarity and consistency. The ultimate decisions on classification of activities and the amounts reported, however, were made by the responding agencies. The narrative text, on the other hand, represents the Foundation's interpretation of the statistical and descriptive material submitted by the respondents.

With the exception of AEC and NASA, the data received from the agencies were in terms of obligations and expenditures incurred, or expected to be incurred, regardless of when the funds were appropriated or whether they were identified in the respondent's budget specifically for scientific activities. AEC's data for research and development were reported in terms of accrued costs, while the R&D plant transactions were reported in terms of obligations. NASA reported its 1970 transactions in terms of obligations incurred, while the 1971 and 1972 transactions are in terms of the "budget plan," which approximates obligations.

The data appearing in this report reconcile with data included in "Special Analysis R, Federal Research and Development Programs," in *The Budget of the United States Government, Fiscal Year 1972*. This report is, however, a later and more detailed analysis of the science portion of the budget presented by the President to Congress in January 1971. (See *Relation to Other Reports*, p. 73 for further explanation.) The data for 1972 appearing in this report do not reflect subsequent appropriation and apportionment action that have affected *The Budget, 1972*. The actual effects of these subsequent appropriations and reprogramming actions on 1972 obligations will be reflected in next year's report.

ADJUSTMENTS IN THE DATA

In general, obligations for the three scientific activities covered in this report were separately identified by the responding departments and independent agencies. However, two departments with large R&D programs and many extramural contracts—DOD and HEW (NIH)—had difficulty in identifying scientific and technical information activities separately from research and development. This has resulted in reporting by these agencies of the same obligations both as research and development and as scientific and technical information.

Hence, approximately one-third of total obligations for scientific and technical information (STINFO) activities

APPENDIX A

technical notes

These technical notes deal with scope and method, adjustments in data, definitions, changes in reporting, limitations of data, relation to other reports, and sources. The definitions and reporting requirements are unchanged from the preceding issue of the *Federal Funds* series.

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NOTE: I

SCOPE AND METHOD

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Hence, approximately one-third of total obligations for scientific and technical information (STINFO) activities

(in categories 1, 2, and 3) were also reported in 1970-72 as research and development. These funds amounted to 0.8 percent of the total Federal obligations for research and development. Since research and development in information sciences, documentation and information systems, and techniques and devices (STINFO category 4) is by definition an R&D activity, these functions are properly included in part I by all reporting agencies (appendix table A-1).

TABLE A-1. OBLIGATIONS REPORTED BOTH FOR CATEGORIES 1-3 OF SCIENTIFIC AND TECHNICAL INFORMATION AND FOR RESEARCH AND DEVELOPMENT

(Millions of dollars)

| Agency | Actual | Estimates | |
|---|---------|-----------|---------|
| | 1970 | 1971 | 1972 |
| Total..... | \$123.4 | \$121.4 | \$120.4 |
| Department of Defense..... | 112.1 | 109.8 | 108.8 |
| Department of the Army..... | 67.4 | 68.4 | 68.2 |
| Department of the Navy..... | 13.5 | 13.6 | 14.1 |
| Department of the Air Force..... | 16.9 | 15.3 | 13.7 |
| Defense Agencies..... | 14.3 | 12.5 | 12.8 |
| Department of Health, Education, and Welfare—National Institutes of Health..... | 11.3 | 11.6 | 11.6 |

* The categories are (1) publication and distribution; (2) documentation, reference, and information services; and (3) symposia and audiovisual media.

In order to obtain data representing only research and development, appendix table A-2 eliminates the overlaps of funding and shows the net totals of obligations for support of the three scientific activities covered in this report.

TABLE A-2. ADJUSTED OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT; SCIENTIFIC AND TECHNICAL INFORMATION; AND COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA

(Millions of dollars)

| Activity | Actual | Estimates | |
|---|------------|------------|------------|
| | 1970 | 1971 | 1972 |
| Adjusted total, three scientific activities..... | \$16,605.5 | \$16,783.6 | \$18,004.8 |
| 1. Research, development, and R&D plant, adjusted total..... | 15,730.9 | 15,924.9 | 17,129.4 |
| Research, development, and R&D plant (as reported)..... | 15,854.3 | 16,046.3 | 17,249.4 |
| Scientific and technical information (categories 1-3) also reported as R&D..... | -123.4 | -121.4 | -120.4 |
| 2. Scientific and technical information, adjusted total..... | 324.7 | 332.9 | 338.6 |
| Scientific and technical information (as reported)..... | 386.8 | 400.4 | 413.0 |
| R&D included in information activities (category 4)..... | -62.1 | -67.5 | -74.4 |
| 3. Collection of general-purpose scientific data, total (as reported)..... | 549.9 | 525.8 | 536.8 |

NOTE: Detail may not add to totals because of rounding.

APPENDIX A

notes

method, ad-
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unchanged
series.

DEFINITIONS

The definitions are presented to correspond with the three parts of the report. Some definitions in part I are also applicable to parts II and III. The definitions are essentially unchanged from prior issues of the **Federal Funds** series.

Part I. Research, Development, and R&D Plant

(1) RESEARCH, DEVELOPMENT, AND R&D PLANT

This term includes all direct, indirect, incidental, or related costs resulting from or necessary to research, development, and R&D plant, regardless of whether the research and development are performed by a Federal agency (intramural) or performed by private individuals and organizations under grant or contract (extramural). Research and development exclude routine product testing, quality control, mapping and surveys, collection of general-purpose statistics, experimental production, and activities concerned primarily with the dissemination of scientific information and the training of scientific manpower.

a. **Research** is systematic, intensive study directed toward fuller scientific knowledge or understanding of the subject studied. Research may be classified as either basic or applied.

In **basic research** the investigator is concerned primarily with gaining a fuller knowledge or understanding of the subject under study.

In **applied research** the investigator is primarily interested in a practical use of the knowledge or understanding for the purpose of meeting a recognized need.

b. **Development** is systematic use of the knowledge and understanding gained from research, directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes. It excludes quality control, routine product testing, and production.

c. **R&D plant** (or R&D facilities and fixed equipment, such as reactors, wind tunnels, and radio telescopes) includes acquisition of, construction of, major repairs to, or alterations in structures, works, equipment, facilities, or land, for use in R&D activities at Federal or non-Federal installations. Excluded from the R&D plant category are expendable equipment and office furniture and equipment. Obligations for foreign R&D plant are limited to Federal funds for facilities located abroad and used in support of foreign research and development.

(2) OBLIGATIONS AND EXPENDITURES

a. **Obligations** represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated and when future payment of money is required.

b. **Expenditures** represent the amounts for checks issued and cash payments made during a given period, regardless of when the funds were appropriated.

For those agencies operating on a cost-type budget, accrued expenditures and costs are reported instead of obligations. Accrued expenditures represent all costs accrued during the reporting period except those subject to reimbursement from other agencies. The information on expenditures represents net cash payments for research, development, and R&D plant, exclusive of any receipts of the agency for those purposes.

The obligations and expenditures reported cover all transactions from all funds available to the agency from direct appropriations, trust funds or special account receipts, corporate income, or other sources, including funds appropriated to the President that an agency received or expects to receive. The amounts reported for each year reflect obligations and expenditures for that year regardless of when the funds were originally authorized or received and regardless of whether they were appropriated, received, or identified in the agency's budget specifically for research, development, or R&D plant.

An agency making a transfer of funds to another agency includes such transfers in its report of obligations and expenditures. The receiving agency does not report, for purposes of this survey, on funds transferred to it from another agency. Similarly, a subdivision of an agency that transfers funds to another subdivision within its own agency reports such obligations or expenditures.

Obligations and expenditures for work performed in foreign countries include funds directly available to Federal agencies and special foreign currencies separately appropriated. (The latter currencies are derived largely from provisions of Public Law 480, 1954, as amended.)

(3) COST COVERAGE

Funds reported for research and development reflect full costs. In addition to costs of specific R&D projects, the applicable overhead costs are also included. The amounts reported include the costs of planning and administering R&D programs, laboratory overhead, pay of military personnel, and departmental administration.

(4) FISCAL YEAR

The fiscal year is the Government accounting period beginning July 1 of one year and ending June 30 of the following calendar year; thus, fiscal year 1972 began on July 1, 1971, and will end June 30, 1972.

(5) AGENCY

An agency is an organization of the Federal Government whose principal executive officer reports to the President. The one exception is the Library of Congress, which is also included in this survey. The term **subdivision** refers to any major organizational unit of a reporting agency, such as a bureau, division, office, or service.

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(6) PERFORMERS

Performers are either intramural organizations accomplishing operating functions or extramural organizations or persons receiving support or providing services as a result of a contract or grant.

a. **Intramural performers** are the agencies of the Federal Government. Their work is carried on directly by their own personnel. Obligations reported under this category are for activities performed or to be performed by the reporting agency itself, or are funds that this agency transfers to another Federal agency to have its activities performed for it. However, the ultimate performer must be a Federal agency. If the ultimate performer is not a Federal agency, the funds so transferred are reported by the transferring agency under the appropriate extramural performer (industrial firms, universities and colleges, other nonprofit institutions). Intramural performance includes the costs of supplies and equipment, essentially of an "off-the-shelf" nature, which are procured for use in intramural research and development. Also included as part of the intramural performance total are the expenses of Federal personnel engaged in planning and administering intramural and extramural R&D programs.

b. **Extramural performers** are all organizations outside the Federal complex which perform with Federal funds under contract or grant. Only costs of actual extramural performance are reported. The costs of extramurally procured "off-the-shelf" supplies and equipment required to support intramural research and development are reported as part of the costs of intramural performance. For example, the purchase from an extramural source of a launch vehicle which is operational, i.e., has gone beyond the development or prototype stage, and which is used in an intramural Federal installation for the performance of research and development, is reported as part of the cost of intramural research and development. Extramural performers are identified as follows:

(i) **Industrial firms** are those organizations that may legally distribute net earnings to individuals or to other organizations.

(ii) **Universities and colleges** are institutions engaged primarily in providing resident instruction for at least a 2-year program above the secondary school level. Included are colleges of liberal arts; schools of arts and sciences; professional schools, such as in engineering and medicine, including affiliated hospitals; associated research institutes; and agricultural experiment stations.

(iii) **Other nonprofit institutions** are private organizations other than educational institutions, no part of whose net earnings inure to the benefit of a private stockholder or individual, and other private organizations organized for the exclusive purpose of turning over their entire net earnings to such nonprofit organizations.

(iv) **Federally Funded Research and Development Centers** are R&D-performing organizations exclusively or substantially financed by the Federal Government that are supported by the Federal Government either to meet a particular R&D objective or, in some instances, to provide major facilities at universities for research and associated training purposes. Each center is administered by one of the above extramural performers.

In general, all of the following qualification criteria are met by an institutional unit before it is included in the Federally Funded Research and Development Centers category: 1) its primary activities include one or more of the following: basic research, applied research, development, or management of research and development (specifically excluded are organizations engaged primarily in routine quality control and testing, routine service activities, production, mapping and surveys, and information dissemination); 2) it is a separate operational unit within the parent organization or is organized as a separately incorporated organization; 3) it performs actual research and development or R&D management either upon direct request of the Federal Government or under a broad charter from the Federal Government, but in either case under the direct monitorship of the Federal Government; 4) it receives its major financial support (70 percent or more) from the Federal Government, usually from one agency; 5) it has or is expected to have a long-term relationship with its sponsoring agency (about 5 years or more), as evidenced by specific obligations assumed by it and the agency; 6) most or all of its facilities are owned or are funded for in the contract with the Federal Government; and 7) it has an average annual budget (operating and capital equipment) of at least \$500,000.

(v) **Foreign performers** are confined to foreign citizens, organizations, or governments, as well as international organizations, such as NATO, UNESCO, WHO, performing work abroad financed by the Federal Government. Excluded are payments to U.S. agencies, organizations, or citizens performing research and development abroad for the Federal Government. (The survey objectives do not seek information on "off-shore" payment.) Also excluded are payments to foreign scientists performing in the United States.

(vi) **Other performers** include all other miscellaneous performers not covered in the foregoing categories, e.g., State and local governments and private individuals.

(7) FIELDS OF SCIENCE

The fields of science in this survey are divided into eight broad field categories, most of them consisting of a number of detailed fields. The broad fields are life sciences, psychology, physical sciences, environmental sciences, mathematics, engineering, social sciences, and other sciences not elsewhere classified. The following listing presents the fields grouped under each of the broad fields, together with illustrative disciplines.

a. **Life sciences** consist of the biological, clinical medical, other medical sciences, and life sciences not elsewhere classified.

Life sciences include the following disciplines:

Anatomy; animal sciences; bacteriology; biochemistry; biogeography; biological oceanography; biophysics; dentistry; ecology; embryology; entomology; evolutionary biology; genetics; immunology; internal medicine; microbiology; neurology; nutrition and metabolism; ophthalmology; parasitology; pathology; pharmacology; pharmacy; physical anthropology; physical medicine and rehabilitation; physiology; plant sciences; podiatry; preventive medicine and public health; psychiatry; radiobiology; radiology; surgery; systematics; veterinary medicine.

Research in some of these disciplines may be classed as biological, clinical medical, or other medical, depending upon the nature of the particular project.

Biological sciences are those which, apart from the clinical medical and other medical sciences as defined below, deal with the origin, development, structure, function, and interaction of living things.

Clinical medical sciences are concerned with the study of the pathogenesis, diagnosis, or therapy of a particular disease or abnormal condition in living human subjects under controlled conditions.

Other medical sciences are concerned with studies of the causes, effects, prevention, or control of abnormal conditions in man or in his environment as they relate to health, except for the clinical aspects as defined above.

Life sciences, nec 1

b. **PSYCHOLOGY** deals with behavior, mental processes, and individual and group characteristics and abilities. Psychology is divided into three categories: biological aspects, social aspects, and psychological sciences not elsewhere classified. Examples of the disciplines under each of these fields are:

Biological aspects:

experimental psychology; animal behavior; clinical psychology; comparative psychology; ethology.

Social aspects:

social psychology; educational, personnel, vocational psychology and testing; industrial and engineering psychology; development and personality.

Psychological sciences, nec 1

c. **PHYSICAL SCIENCES** are concerned with the understanding of the material universe and its phenomena. They comprise the fields of astronomy, chemistry, physics, and physical sciences not elsewhere classified. Examples of the disciplines under each of these fields are:

Astronomy:

laboratory astrophysics; optical astronomy; radio astronomy; theoretical astrophysics; X-ray, Gamma-ray, neutrino astronomy.

Chemistry:

inorganic; organo-metallic; organic; physical.

Physics:

acoustics; atomic and molecular; condensed matter; elementary particles; nuclear structure; optics; plasma.

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embryology; entomology; evolutionary biology; genetics; immu-
nology; internal medicine; microbiology; neurology; nutrition and
metabolism; ophthalmology; parasitology; pathology; pharma-
cology; pharmacy; physical anthropology; physical medicine and
rehabilitation; physiology; plant sciences; podiatry; preventive
medicine and public health; psychiatry; radiobiology; radiology;
surgery; systematics; veterinary medicine.

Research in some of these disciplines may be classed
as biological, clinical medical, or other medical, depend-
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Biological sciences are those which, apart from the
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Other medical sciences are concerned with studies of
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Life sciences, nec ¹

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Biological aspects:

experimental psychology; animal behavior; clinical psychology;
comparative psychology; ethology.

Social aspects:

social psychology; educational, personnel, vocational psychology
and testing; industrial and engineering psychology; development
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laboratory astrophysics; optical astronomy; radio astronomy; theo-
retical astrophysics; X-ray, Gamma-ray, neutrino astronomy.

Chemistry:

inorganic; organo-metallic; organic; physical.

Physics:

acoustics; atomic and molecular; condensed matter; elementary
particles; nuclear structure; optics; plasma.

Physical sciences, nec ¹

d. **ENVIRONMENTAL SCIENCES** (terrestrial and extra-
terrestrial) are concerned with the gross nonbiological
properties of the areas of the solar system which directly
or indirectly affect man's survival and welfare; they
comprise the fields of atmospheric sciences, geological
sciences, oceanography, and environmental sciences not
elsewhere classified. Obligations for oceanography are
confined to studies supporting physical oceanography.
Studies pertaining to life in the sea, or other bodies of
water, are reported as support of biology. Support of ship
operations is, where appropriate, prorated between physi-
cal and biological oceanography. Examples of the
disciplines under each of these fields are:

Atmospheric sciences:

aeronomy; solar; weather modification; extraterrestrial atmos-
pheres; meteorology.

Geological sciences:

engineering geophysics; general geology; geodesy and gravity;
geomagnetism; hydrology; inorganic geochemistry; isotopic geo-
chemistry; organic geochemistry; laboratory geophysics; paleomag-
netism; paleontology; physical geography and cartography; seis-
mology; soil sciences.

Oceanography:

chemical oceanography; geological oceanography; physical ocean-
ography; marine geophysics.

Environmental sciences, nec ¹

e. **MATHEMATICS** employs logical reasoning with the
aid of symbols and is concerned with the development of
methods of operation employing such symbols. Exam-
ples of mathematical disciplines are:

algebra; analysis; applied mathematics; computer science; foun-
dations and logic; geometry; numerical analysis; statistics; topol-
ogy.

f. **ENGINEERING** is concerned with studies directed to-
ward developing engineering principles or toward making
specific scientific principles usable in engineering prac-
tice. Engineering is divided into eight fields: aeronauti-
cal, astronautical, chemical, civil, electrical, mechanical,
metallurgy and materials, and engineering not elsewhere
classified. Examples of disciplines under each of these
fields are:

Aeronautical:

aerodynamics.

Astronautical:

aerospace; space technology.

Chemical:

petroleum; petroleum refining; process.

Civil:

architectural; hydraulic; hydrologic; marine; sanitary and environ-
mental; structural; transportation.

Electrical:

communication; electronic power.

Mechanical:

engineering mechanics.

Metallurgy and Materials:

ceramic; mining; textile; welding.

Engineering, nec¹

agricultural; industrial and management; nuclear; ocean engineering; systems.

g. SOCIAL SCIENCES are directed toward an understanding of the behavior of social institutions and groups and of individuals as members of a group. These include anthropology, economics, history, linguistics, political science, sociology, and social sciences not elsewhere classified. Examples of the disciplines under the fields of social science are:

Anthropology:

archaeology; cultural and personality; social and ethnology; applied anthropology.

Economics:

econometrics and economic statistics; history of economic thought; international economics; industrial, labor and agricultural economics; macroeconomics; microeconomics; public finance and fiscal policy; theory; economic systems and development.

History:

cultural; political; social; history and philosophy of science.

Linguistics:

anthropological-archaeological; computational; psycholinguistics; sociolinguistics.

Political science:

area or regional studies; comparative government; history of political ideas; international relations and law; national political and legal systems; political theory; public administration.

Sociology:

comparative and historical; complex organizations; culture and social structure; demography; group interactions; social problems and social welfare; sociological theory.

Social sciences, nec¹

research in law and education not elsewhere classified; socioeconomic geography.

h. OTHER SCIENCES not elsewhere classified. Includes multidisciplinary and interdisciplinary projects that cannot be classified within one of the above broad fields of science.

(8) GEOGRAPHIC DISTRIBUTION OF 1970 R&D OBLIGATIONS

a. Ten agencies participated in the survey on the geographic distribution of obligations for research and development and R&D plant. These 10 respondents accounted for 98 percent of total Federal R&D and R&D plant obligations in 1970. The respondents were the Departments of Agriculture, Commerce, Defense, the Interior, Transportation, and Health, Education, and Welfare; the Atomic Energy Commission; the National Aeronautics and Space Administration; the National Science Foundation; and the Office of Economic Opportunity.

¹ Not elsewhere classified. Includes multidisciplinary projects within the broad field and single-disciplinary projects for which a separate field has not been assigned.

b. Data for 1970 were requested in terms of the principal location (State or outlying area) where the work was performed by the prime contractor, grantee, or intramural organization. Where this information was not available in their records, the respondents were asked to assign the obligations to the State, outlying area, etc. where the prime contractor, grantee, or intramural organization was located.

c. Obligations were reported for research and development as a combined amount.

d. Specifically omitted from the survey were R&D obligations to foreign performers and obligations for R&D plant used in support of foreign performers.

e. In addition to obtaining data on a prime contractor or grantee basis, the survey requested information on the geographic distribution of 1970 first-tier subcontracting under each new and continuing prime contract or grant for which \$20 million or more was obligated in 1970.

Part II. Scientific and Technical Information

Scientific and technical information consists of knowledge or data resulting from the conduct of research and development, or knowledge of data required for organizing, administering, or performing research and development. It encompasses any information in recorded or other communicable form which presents the status, progress, or results of research and development in science or technology.

Exclusions:

(a) training costs for personnel engaged in scientific and technical information activities;

(b) raw scientific and technical data that have not been processed for use by scientific personnel engaged in research and development (included in part I of this survey);

(c) statistical and general-purpose data that are collected and organized for other than specific use in research and development (included in part III of this survey);

(d) information that has been prepared primarily to inform or instruct the general public or others below the graduate or professional level of scientific activity.

Scientific and technical information activities include all management, administrative, R&D, and operational efforts directed to the planning, support, control, and improvement of the functions or tasks that deal with the acquisition, processing, handling, and communication of scientific and technical information. These may include the acquisition, maintenance, or rental of special equipment primarily for use in connection with scientific and technical information activities.

Categories of Services

(1) PUBLICATIONS

a. Publication includes two activities:

Publication performed after recording of the information to but not including the finished product: evaluation; writing; technical drawing; printing or offsetting; proofreading; layout; make-ready; duplication.

These publications include the following: references and serials; in the R&D process; monographs, reports, bibliographies, books, and treatises.

Distribution transmission of scientific and technical information, for example, mailing.

Excluded from involved in the documents or under category aids, such as picture films, below.

b. **Support** paid out of subscription and grants or of journals, textbooks.

(2) DOCUMENT SERVICES

a. **Library** tion, collection and technical books, periodicals such reference subject headings such activities scientific and technical may consist of ing, abstracts,ographies, reviewing.

b. Data for 1970 were requested in terms of the principal location (State or outlying area) where the work was performed by the prime contractor, grantee, or intramural organization. Where this information was not available in their records, the respondents were asked to assign the obligations to the State, outlying area, etc. where the prime contractor, grantee, or intramural organization was located.

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TECHNICAL NOTES

Categories of Scientific and Technical Information Activity

(1) PUBLICATION AND DISTRIBUTION

a. **Publication and distribution.** This subcategory includes two activities.

Publication includes all document production tasks performed after the author's manuscript or similar initial recording of the information has been finished and leading to but not including initial issuance or distribution of the finished document. Examples of publication activities: evaluation of a manuscript or patent; professional writing; technical or copy editing and revising not performed by the author, abstractor, or bibliographer; technical drawing and artwork; preparation of final copy for printing or other reproduction; also composing, typesetting, proofreading, display, illustrating, photographing, layout, makeup, printing, mimeographing, and photoduplication.

These publication activities may be concerned with any of the following: data compilations, proceedings of conferences and symposia, specifications and manuals used in the R&D process, technical reports, journal articles, monographs, reviews, dissertations, summaries, abstracts, bibliographies, indexes, special reports, patents, reference books, and treatises.

Distribution includes functions related to the initial transmission or dissemination of newly documented scientific and technical information from source to user, for example, mailing, shipping, and maintenance of controls.

Excluded from category 1 are professional efforts involved in the compilation and preparation of reference documents or bibliographies. These activities are included under category 2, below. Also excluded are audiovisual aids, such as taped talks, slide presentations, and motion picture films. These are included under category 3, below.

b. **Support of publications** includes all page charges paid out of Federal funds to primary journals; special subscription arrangements to maintain primary journals; and grants or contracts for publication and distribution of journals, conference proceedings, monographs, or textbooks.

(2) DOCUMENTATION, REFERENCE AND INFORMATION SERVICES

a. **Library and reference services** include the acquisition, collection, exchange, loan, and storage of scientific and technical documentary materials. These may be books, periodicals, manuals, reports, and drawings, and such reference sources as abstract journals, indexes, and subject heading and title lists. This subcategory includes such activities as the organizing and processing of scientific and technical documentary materials. Such work may consist of: indexing, coding, filing, subject matter analysis, abstracting, announcing, listing, preparing bibliographies, reviewing, screening, documenting, and cataloging.

This category includes rental or acquisition and maintenance of computers and other equipment and costs of their operation. It includes special retrieval services provided in response to user needs (reprography, SDI, demand bibliographies, etc.), sale and loan of documentary materials, dissemination of documents via mail and personal visits, and liaison activities with users and other information services.

Documentation centers, depositories, clearinghouses, and libraries are included under this subcategory (a).

b. **Specialized information center services** (including technical information analysis center services) cover the collection, review, summarization, and evaluation of scientific and technical information and data in well-defined, specialized fields. They include advisory and other user services. Specialized information centers may be either discipline- or mission-oriented. The services of these centers are distinguished from those of documentation centers, clearinghouses, and libraries, whose functions are primarily concerned with the handling of documents rather than with the technical information contained in the documents.

c. **Translations** include all costs involved in the translation of documents and other materials from one language to another in support of R&D activities; also the purchase of foreign journals and other materials to be translated.

(3) SYMPOSIA AND AUDIOVISUAL MEDIA

a. **Symposia and technical meetings** include all efforts directed to planning, scheduling, announcing, supporting, sponsoring, conducting, and attending symposia, conferences, and meetings; primarily concerned with disseminating scientific and technical information. The travel and subsistence of participants in such symposia, conferences, and meetings are covered in these costs.

b. **Audiovisual media and other forms of nonreading communication** refer to the costs of producing technical and documentary motion picture films, slides, and photographs for R&D purposes, as well as audio and visual aids, such as taped talks, television film, or visual magnetic tape. This category also includes exhibits but excludes media primarily intended for training or public information purposes.

(4) RESEARCH AND DEVELOPMENT IN INFORMATION SCIENCES, DOCUMENTATION AND INFORMATION SYSTEMS, TECHNIQUES AND DEVICES

This category includes the conduct and support of research and development of new and nonconventional methods, techniques, systems, and machines for improving scientific and technical information functions under each of the other three categories. Such support would include meetings related specifically to such R&D work.

It also includes the conduct and support of studies and surveys to identify broad and specific aspects of scientific information problems. Examples of activities included under this category are: development and testing of machines, devices, and techniques for storage and retrieval of information and data; linguistics research focused on information processing; language and machine translation; information theory; automata theory; artificial intelligence; logic and switching theory; operations or systems research on scientific and technical information systems and processes; documentation of document storage and retrieval; library science; network design; studies of subject classification and indexing schemes; and studies of scientific and technical information communication systems.

Also included under this category are applicable R&D costs for improving, modernizing, and renovating current scientific and technical information, data, and communication systems. Research and development conducted at documentation centers, libraries, and specialized information centers are included but not the costs associated with establishing new centers or systems once past the development stage. As soon as a new system moves out of the experimental phase and into the operational phase, its costs are included under the appropriate category and subcategory above (1, 2, or 3) and no longer under category 4.

Part III. Collection of General-Purpose Scientific Data

(1) GENERAL-PURPOSE SCIENTIFIC DATA

General-purpose scientific data are newly gathered statistics, observations, readings, specimens, and other facts obtained from such activities as surveys, field investigations, laboratory analyses, and compilation of operating records. These data represent available information which separately or in combination with other information can be applied to useful, general scientific purposes and are disseminated to a wide variety of users, including public agencies, the general public, and research investigators. They may have been collected primarily for general-purpose use or derived from an operating function. However, they are not data used solely for internal operating purposes.

Exclusion. General-purpose scientific data are distinguished in this survey from data collected in the conduct of research and development and from data gathered for scientific and technical information activities. The gathering of raw data primarily to further an R&D project is an integral part of the R&D process. Research on statistical survey methods and techniques is also considered a part of research and development. As to data collected as a part of scientific and technical information activities, these are distinguished from general-purpose scientific data because they are either derived from R&D activities or used in R&D activities primarily by scientists and engineers.

It also includes the conduct and support of studies and surveys to identify broad and specific aspects of scientific information problems. Examples of activities included under this category are: development and testing of machines, devices, and techniques for storage and retrieval of information and data; linguistics research focused on information processing; language and machine translation; information theory; automata theory; artificial intelligence; logic and switching theory; operations or systems research on scientific and technical information systems and processes; documentation or document storage and retrieval; library science; network design; studies of subject classification and indexing schemes; and studies of scientific and technical information communication systems.

Also included under this category are applicable R&D costs for improving, modernizing, and renovating current scientific and technical information, data, and communication systems. Research and development conducted at documentation centers, libraries, and specialized information centers are included but not the costs associated with establishing new centers or systems once past the development stage. As soon as a new system moves out of the experimental phase and into the operational phase, its costs are included under the appropriate category and subcategory above (1, 2, or 3) and no longer under category 4.

Part III. Collection of General-Purpose Scientific Data

(1) GENERAL-PURPOSE SCIENTIFIC DATA

General-purpose scientific data are newly gathered statistics, observations, readings, specimens, and other facts obtained from such activities as surveys, field investigations, laboratory analyses, and compilation of operating records. These data represent available information which separately or in combination with other information can be applied to useful, **general** scientific purposes and are disseminated to a wide variety of users, including public agencies, the general public, and research investigators. They may have been collected primarily for general-purpose use or derived from an operating function. However, they are not data used solely for internal operating purposes.

Exclusion. General-purpose scientific data are distinguished in this survey from data collected in the conduct of research and development and from data gathered for scientific and technical information activities. The gathering of raw data primarily to further an R&D project is an integral part of the R&D process. Research on statistical survey methods and techniques is also considered a part of research and development. As to data collected as a part of scientific and technical information activities, these are distinguished from general-purpose scientific data because they are either derived from R&D activities or used in R&D activities primarily by scientists and engineers.

(2) NATURAL AND SOCIAL PHENOMENA

The general-purpose scientific data pertain to two phenomena:

(a) **Natural Phenomena:** data collected in the engineering, environmental life, mathematical, physical and psychological sciences. Examples are precipitation measurements, tide and stream gauging, topographic mapping, the determination of physical and chemical constants, and the classification of entomological specimens.

(b) **Social Phenomena:** data collected in the social sciences. Examples are data concerned with population, employment, industrial and agricultural production, housing construction, education, crime, and other socioeconomic phenomena.

(3) CATEGORIES OF GENERAL-PURPOSE SCIENTIFIC DATA COLLECTION ACTIVITY

Gathering, Processing, and Collating include the planning and preparation of questionnaires and the evaluation of data for validity.

Analysis includes narrative discussion of data relationships and summarization of data for general use. **Excluded** is the analysis of scientific general-purpose data in conjunction with R&D projects; such activity is considered a part of research and development.

Publication includes preparation of general-purpose scientific data for publication or any other activities which made data available to the general public, such as preparation of exhibits.

Equipment includes the procurement or rental of equipment for gathering, processing, or collating data.

CHANGES IN REPORTING

Responses from the agencies in this survey, as in the previous ones, reflect updating of estimates for the last 2 years of the previous report. Such updating is normal in the budgetary cycle. In addition, from time to time, responses over the years have reflected reappraisals and revisions in classification of agencies' R&D operations. When this has occurred, the National Science Foundation has revised prior-year data to maintain consistency and comparability with the most recent reporting. Since no statistical inquiry is free of problems of concepts and definitions for the respondents, revisions to improve the reporting are encouraged by NSF.

No significant revisions in reporting were made for the agencies in this present survey. However, historical data in appendix tables C-92 through C-110 reflect changes for 1968 and prior years made when revisions in concept were introduced in previous surveys.

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LIMITATIONS OF THE DATA

It is important to bear in mind that the data presented in this report are based upon the Federal budget. The respondents have reconciled the data reported here with amounts for scientific activities shown in **The Budget of the United States Government, Fiscal Year 1972**. The amounts reported for each year indicate the obligations or expenditures incurred, or expected to be incurred, in that year, regardless of when the funds were authorized or received by an agency and regardless of whether the funds were identified in the agency's budget specifically for research, development, R&D plant, scientific and technical information, or collection of general-purpose scientific data. Following the format of Federal budgets, data are reported in 3-year cycles.

In this report, amounts for 1970 reflect transactions of a completed fiscal year and thus are "actual" amounts. Data for 1971 and 1972 are based on various stages of the budget and planning cycles and consequently are "estimates." Data for 1972, moreover, do not reflect appropriation, apportionment, or allocation decisions that took place subsequent to receipt by NSF of data from the respondents. The text and statistical tables for 1972, thus, are agency proposals to undertake programs. Both 1971 and 1972 data are subject to reprogramming and other administrative changes instituted after publication of **The Budget, 1972**.

Aside from being estimates in budgetary terms, in a broader sense all data reported concerning scientific activities are estimates, and accounting precision cannot be imputed to them. Quantification of research and development is complicated by difficulties of classifying abstract and dynamic activities. Agency records in most cases do not classify agency scientific activities into such categories as basic research, applied research, and development. In addition, amounts for scientific activities are usually not uniformly nor precisely identified in budgets of different agencies. An element of "best judgment" therefore is introduced when a respondent classifies and identifies funds by character-of-work categories. The same element of subjective judgment also holds in categorizing a large interdisciplinary research program by primary field of science. Compensating for such factors, however, is the fact that the survey respondents, in general, are in agency subdivisions that have participated in as many as 20 successive annual surveys and have developed a general rationale for using information available in their records to meet the demands of the survey.

It should be mentioned that the Foundation encourages respondents to revise their reporting practices whenever necessary to improve accuracy. Such revisions made by the agencies are then incorporated into the historical data to maintain consistency and comparability of the statistical series.

In some cases it has not been possible to report the full cost of research and development. For example, the

headquarters costs of planning and administering R&D programs of DOD and AEC are not included in these reports because these agencies have indicated that it is administratively impracticable to identify the amounts.

R&D plant data reported here are to some extent understated because of the difficulty encountered by some agencies in identifying and reporting this information, particularly in the case of DOD and NASA. While DOD reports obligations for R&D plant funded by its construction appropriation, it is able to identify only a small portion of the amount of R&D plant support included in R&D contracts that were funded from its RDT&E appropriation. NASA faces similar problems in reporting R&D plant data.

In the area of scientific and technical information, extramural obligations are limited to funds allocated for grants and contracts that are primarily for the support of scientific and technical information activities. As in prior volumes of this series, extramural funds for information activities performed as a supplemental, supporting service under grants or contracts primarily for research and development have been excluded because it is usually not feasible for the respondent to determine what portion of an R&D grant or contract actually supports information activities. Some R&D projects receive support from several agencies through a number of grants and/or contracts, and in such instances, related information activities may pertain to the overall R&D project and may not be identifiable under a particular grant or contract.

RELATION TO OTHER REPORTS

(1) FEDERAL SUPPORT TO UNIVERSITIES AND COLLEGES

The Committee on Academic Science and Engineering (CASE) of the Federal Council for Science and Technology prepares reports relating to Federal support of academic science. Both the CASE and **Federal Funds** reports provide data on Federal obligations for research and development and for R&D plant to universities and colleges and to university-administered Federally Funded Research and Development Centers (FFRDC's). The CASE report, however, is based on obligations of Federal agencies to each individual academic institution, while the **Federal Funds** report is concerned with obligations to universities and colleges as a performer group. Further, the CASE study is based on reports of only 13 agencies—the Departments of Agriculture, Commerce, Defense, Health, Education, and Welfare, Housing and Urban Development, the Interior, Labor, and Transportation; the Atomic Energy Commission; the National Aeronautics and Space Administration; the National Science Foundation; the Agency for International Development; and the Office of Economic Opportunity—while **Federal Funds** is composed of obligations of all agencies. (The 13 respondents for CASE, however, account for 99 percent of the Federal R&D total to universities and colleges and virtually all obligations to university-administered FFRDC's.) In addition, the CASE report includes funds for other activities, such as science education and non-science support.

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The different reporting procedures have led to different amounts being reported by CASE and Federal Funds as follows:

a. The obligations for research and development to universities and colleges reported for Federal Funds in 1970 amounted to \$1,473 million or \$4 million more than the amount reported for CASE.

b. The total R&D obligations to university-administered FFRDC's reported for Federal Funds was \$750 million in 1970 or \$50 million less than reported for CASE. The \$50 million subcontracted by NASA's Jet Propulsion Laboratory accounted for this difference. For Federal Funds this amount is included in ultimate-performer categories (mainly industry), while for CASE the subcontracted amount was included in the R&D obligations to FFRDC's administered by universities.

c. The total R&D plant obligations to FFRDC's administered by universities and colleges reported for Federal Funds was \$169 million in 1970 or \$12 million more than reported for CASE. Most of this difference arose from AEC reporting "costs" for CASE and "obligations" for Federal Funds.

The following factors should also be considered in comparing the data appearing in the two reports:

(a) For Federal Funds each agency includes in its own obligations the amounts transferred to other agencies for furtherance of its work, and the receiving agencies do not report funds transferred to them. On the other hand, in the CASE survey, the data are reported by the agency that made the final distribution of the funds to a given institution. Thus, for the CASE survey, agencies included funds received from other agencies, and excluded funds transferred to other agencies (the reverse of the Federal Funds process). While such transfers should balance each other out with no resulting changes in total R&D obligations, these varying reporting practices do add to the possibility of differences between the two reports.

(b) The CASE reports, in most instances, are prepared by other components within each agency than those which prepare the Federal Funds responses. Furthermore, the CASE data are collected several months earlier than the Federal Funds statistics. Although, in theory, these conditions in themselves should not lead to reporting differences, in practice differences do arise.

(2) SPECIAL ANALYSES, BUDGET OF THE UNITED STATES

In a section of Special Analyses, Budget of the United States Government, the Office of Management and Budget (OMB) publishes estimates of obligations and expenditures for research, development, and R&D plant. However, the data in that section—"Special Analysis R, Federal Research and Development Programs" in the 1972 Budget—do not provide as much detail on character of work or performers as Federal Funds and provide no information on fields of science or geographic distribution.

However, "Special Analysis R" and **Federal Funds** utilize the same definitions for research and development and for R&D plant. The estimates for research and development published in the two reports are comparable even though differences do exist. The differences between the two reports are as follows:

| Total R&D obligations (Billions of dollars) | | | |
|--|---------|---------|---------|
| | FY 1970 | FY 1971 | FY 1972 |
| Federal Funds | \$15.3 | \$15.4 | \$16.7 |
| Special Analysis R | 15.3 | 15.6 | 16.7 |

The variance in the two 1971 R&D totals stems largely from the inconsistent reporting practices followed by NASA. For **Federal Funds**, NASA reported its 1971 R&D funding in terms of the "budget plan" while for the special analysis it reported in terms of "obligations."

The differences between the two reports with respect to R&D obligations to universities and colleges are as follows:

| R&D obligations to universities and colleges (Millions of dollars) | | | |
|---|---------|---------|---------|
| | FY 1970 | FY 1971 | FY 1972 |
| Federal Funds | \$1,473 | \$1,617 | \$1,826 |
| Special Analysis R | 1,479 | 1,653 | 1,896 |

The lower **Federal Funds** totals for R&D obligations to universities and colleges for 1971 and 1972 are primarily due to revisions made in the estimates after data were provided for the special analysis, particularly in the case of the NIH estimates for 1972.

OMB also publishes a special analysis on the principal statistical programs of Federal agencies (Special Analysis F, for fiscal year 1972), which is somewhat comparable to part III of the **Federal Funds** survey (general-purpose scientific data collection). However, "Special Analysis F" covers only social phenomena data while **Federal Funds** part III includes natural phenomena data as well. Also, some activities of Federal agencies have been classified by OMB as statistical although reported as research and development or scientific and technical information to NSF. Furthermore, the OMB analysis does not report on a number of agencies that are included in part III of the Foundation's survey.

The foregoing differences reflect varying methods used to obtain the findings for the two reports. Comparison of these methods may be useful in clarifying individual agency concepts and in revealing complexities in reporting.

(3) AN ANALYSIS OF FEDERAL R&D FUNDING BY BUDGET FUNCTION, 1960-72

NSF has published a report under the above title which provides an analysis of Federal R&D expenditures by functional categories. The functional report compares total Federal outlays by budget functions with Federal R&D expenditures within each of the categories for fiscal years 1960 through 1972. The annual **Federal Funds** series, by contrast, reports on Federal R&D expenditures by agencies but not by functional categories.

The R&D expenditure data for 1960-69 in the function report were based on information submitted by the agencies for the **Federal Funds** series. Thus, the overall R&D expenditures are the same for these years in both reports. However, the function report was prepared before agency responses to **Federal Funds**, Volume XX were received, and therefore, the 1970-72 R&D expenditures had to be based on information submitted by the agencies to OMB for its special analysis of R&D programs with certain adjustments (see above). Consequently, the overall R&D expenditures totals for 1970-72 in the function report differ slightly from the expenditure totals in **Federal Funds**, Volume XX.

(4) OTHER REPORTS

Individual agencies may classify their R&D programs for purposes other than those for which the **Federal Funds** survey is conducted. Definitions and guidelines that are suitable to those other purposes may result in information that is not comparable with the report transmitted to the Foundation for **Federal Funds**.

SOURCES

Data on R&D funds in this report for years prior to 1952 were compiled by the Bureau of the Budget (which later became OMB). Later data were based on NSF surveys. These data have been published in previous issues of this series, but certain adjustments have been made to reflect comparability with the latest reporting concepts introduced by the agencies.

Besides the statistical data collected through the Foundation's survey of Federal agencies, a variety of sources were used in the text of this report, including the narrative statements submitted by the agencies, published records of testimony presented by the agencies to committees of the Senate and the House, the 1972 **Budget Appendix**, and personal contacts with agency respondents.

APPENDIX B

**federally funded
research and
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DEPARTMENT OF DEFENSE

OFFICE OF THE SECRETARY OF DEFENSE

Administered by Other Nonprofit Institutions

Institute for Defense Analyses (IDA)

DEPARTMENT OF THE ARMY

Administered by Universities and Colleges

Army Mathematics Research Center (University of Wisconsin) ¹

Center for Research in Social Systems (American University) ¹

Administered by Other Nonprofit Institutions

Human Resources Research Organization
Research Analysis Corporation (RAC)

DEPARTMENT OF THE NAVY

Administered by Universities and Colleges

Applied Physics Laboratory (Johns Hopkins University)

Applied Physics Laboratory (University of Washington)

Center for Naval Analyses (University of Rochester)

Ordnance Research Laboratory (Pennsylvania State University)

DEPARTMENT OF THE AIR FORCE

Administered by Universities and Colleges

Lincoln Laboratory (Massachusetts Institute of Technology)

Administered by Other Nonprofit Institutions

Aerospace Corporation

Analytic Services, Inc. (ANSER)

Electromagnetic Compatibility Analyses Center
(Illinois Institute of Technology, Research Institute (IITRI))

MITRE Corporation

RAND Corporation

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OFFICE OF EDUCATION

Administered by Universities and Colleges

Center for the Advanced Study of Educational Administration (University of Oregon)

Center for Research and Development in Higher Education (University of California)

DEPARTMENT OF DEFENSE

OFFICE OF THE SECRETARY OF DEFENSE

Administered by Other Nonprofit Institutions

Institute for Defense Analyses (IDA)

DEPARTMENT OF THE ARMY

Administered by Universities and Colleges

Army Mathematics Research Center (University of Wisconsin) ¹

Center for Research in Social Systems (American University) ¹

Administered by Other Nonprofit Institutions

Human Resources Research Organization
Research Analysis Corporation (RAC)

DEPARTMENT OF THE NAVY

Administered by Universities and Colleges

Applied Physics Laboratory (Johns Hopkins University)

Applied Physics Laboratory (University of Washington)

Center for Naval Analyses (University of Rochester)

Ordnance Research Laboratory (Pennsylvania State University)

DEPARTMENT OF THE AIR FORCE

Administered by Universities and Colleges

Lincoln Laboratory (Massachusetts Institute of Technology)

Administered by Other Nonprofit Institutions

Aerospace Corporation

Analytic Services, Inc. (ANSER)

Electromagnetic Compatibility Analyses Center
(Illinois Institute of Technology, Research Institute (IITRI))

MITRE Corporation

RAND Corporation

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

OFFICE OF EDUCATION

Administered by Universities and Colleges

Center for the Advanced Study of Educational Administration (University of Oregon)

Center for Research and Development in Higher Education (University of California)

FFRDC'S

Center for Research and Development for Learning and Re-Education (University of Wisconsin)

Center for the Study of Evaluation of Instructional Programs (University of California)

Center for the Study of Social Organization of Schools and the Learning Process (Johns Hopkins University)

Coordination Center for the National Program in Early Childhood Education (University of Illinois)

Learning Research and Development Center (University of Pittsburgh)

Research and Development Center in Educational Stimulation (University of Georgia)

Research and Development Center in Teacher Education (University of Texas)

Stanford Center for Research and Development in Teaching (Stanford University)

Administered by Other Nonprofit Institutions

Appalachia Educational Laboratory

Center for Educational Policy Research (Stanford Research Institute)

Center for Urban Education

Central Midwestern Regional Educational Laboratory

Eastern Regional Institute of Education

Educational Development Center, Inc.

The Far West Laboratory for Educational Research and Development

Mid-Continent Regional Educational Laboratory

Northwest Regional Educational Laboratory

Policy Research Center (Syracuse University Research Corporation)

Regional Educational Laboratory for the Carolinas and Virginia

Research for Better Schools, Inc.

Southeastern Educational Laboratory

Southwest Educational Development Laboratory

Southwest Regional Educational Laboratory

Southwestern Cooperative Educational Laboratory

Upper Midwest Regional Educational Laboratory, Inc.

ATOMIC ENERGY COMMISSION

Administered by Industrial Firms

Bettis Atomic Power Laboratory (Westinghouse Electric Corp.)
Knolls Atomic Power Laboratory (General Electric Company)
Mound Laboratory (Monsanto Research Corp.)
National Reactor Testing Station (Idaho Nuclear Corp.)
Oak Ridge National Laboratory (Union Carbide Corp.)
Pacific Northwest Laboratory (WADCO Corp., Subsidiary of Westinghouse Electric Corporation)²
Sandia Laboratory (Western Electric Co., Inc.—Sandia Corp.)
Savannah River Laboratory (E. I. duPont de Nemours & Co., Inc.)

Administered by Universities and Colleges

Ames Laboratory (Iowa State University of Science and Technology)
Argonne National Laboratory (University of Chicago and Argonne Universities Assn.)
Brookhaven National Laboratory (Associated Universities, Inc.)
Cambridge Electron Accelerator (Harvard University)
Lawrence Radiation Laboratory, Berkeley and Livermore (University of California)
Los Alamos Scientific Laboratory (University of California)
National Accelerator Laboratory (Universities Research Association, Inc.)
Oak Ridge Associated Universities
Plasma Physics Laboratory (Princeton University)
Princeton-Pennsylvania Accelerator (Princeton University)³
Stanford Linear Accelerator Center (Stanford University)

Administered by Other Nonprofit Institutions

Atomic Bomb Casualty Commission (National Academy of Sciences)
Pacific Northwest Laboratory (Battelle Memorial Institute)²

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Administered by Universities and Colleges

Jet Propulsion Laboratory (California Institute of Technology)
Space Radiation Effects Laboratory (College of William and Mary)

NATIONAL SCIENCE FOUNDATION

Administered by Universities and Colleges

Arecibo Observatory (Cornell University)
Cerro Tololo Inter-American Observatory (Association of Universities for Research in Astronomy, Inc.)
Kitt peak National Observatory (Association of Universities for Research in Astronomy, Inc.)
National Center for Atmospheric Research (University Corporation for Atmospheric Research)
National Radio Astronomy Observatory (Associated Universities, Inc.)

¹ Phased out as an FFRDC as of the end of fiscal year 1970.

² Prior to 1971 Battelle Memorial Institute was the sole contractor at the Pacific Northwest Laboratory. In 1971, the WADCO Corp. became the second contractor along with Battelle.

³ Phased out as an FFRDC at the end of fiscal year 1971.

APPENDIX C

statistical tables, part I

federal funds for research, development, and r&d plant

Summary of Research, Development, and R&D Plant

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C-17. F

C-18. F

C-19. F

C-20. Fed

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NOTES

- The source of data is the National Science Foundation, except where noted on individual tables.
- Estimates for 1972 are based on **The Budget, FY 1972**, as submitted to Congress, and do not reflect subsequent appropriation and apportionment actions.
- Asterisks appearing in lieu of figures indicate that the amounts are less than \$50,000.
- The abbreviation "FFRDC" appearing in statistical tables refers to Federally Funded Research and Development Centers.
- Defense Agencies within the Department of Defense include agencies such as the Advanced Research Projects Agency (ARPA), the Defense Atomic Support Agency, and the Defense Communications Agency.
- Departmentwide Funds of the Department of Defense include the Emergency Fund and Civil Defense.
- The Atomic Energy Commission's R&D data reflect accrued obligations and costs.
- In tables showing extramural performers, obligations to agricultural experiment stations are included under obligations to universities and colleges.
- The National Oceanic and Atmospheric Administration (NOAA) was established in fiscal year 1971 within the Department of Commerce. NOAA includes Commerce's Environmental Science Services Administration (ESSA), which is its largest component. It also has incorporated from Interior the Bureau of Commercial Fisheries, the marine sport fish activities of the

Fish and Wildlife Service, and the Marine Minerals Technology Center of the Bureau of Mines. NOAA has taken over the Army Corps of Engineers' Great Lakes Survey and the Navy's National Oceanographic Data Center and National Oceanographic Instrumentation Center. From the Department of Transportation NOAA has taken the data buoy development activities of the Coast Guard and from the National Science Foundation, its Sea Grant Programs. These agency subdivisions' R&D activities are reported for fiscal year 1970 as though they had been part of NOAA that year.

- The Environmental Protection Agency (EPA) was established in fiscal year 1971. EPA combines a number of components formerly within HEW: the National Air Pollution Control Administration, the Bureau of Solid Waste Management, and the Bureau of Water Hygiene (all previously reported under the Environmental Health Service) and portions of the Bureau of Radiological Health and the pesticide control functions of the Food and Drug Administration. EPA also includes what was previously Interior's Federal Water Pollution Control Administration, the pesticide study functions of its Fish and Wildlife Service, and the Gulf Breeze (Fla.) Biological Laboratory of its Bureau of Commercial Fisheries. In addition, EPA has taken over from the Atomic Energy Commission its environmental radiation standard-setting authority and the pesticides registration program of the Department of Agriculture's Agricultural Research Service. These agency subdivisions' R&D activities are reported for fiscal year 1970 as though they had been part of EPA that year.

Table C-1. Summary of Federal funds for research, development, and R&D plant, fiscal years 1970, 1971, and 1972

(Millions of dollars)

| Item | Actual 1970 | Estimates | |
|--|----------------|-----------|----------|
| | | 1971 | 1972 |
| TOTAL EXPENDITURES FOR RESEARCH, DEVELOPMENT, AND R&D PLANT | 15,735.8 | 15,988.2 | 16,314.8 |
| Research and Development | 15,157.0 | 15,327.0 | 15,673.0 |
| R&D Plant | 578.9 | 661.1 | 641.8 |
| TOTAL OBLIGATIONS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT | 15,854.3 | 16,046.3 | 17,249.8 |
| Research and Development | 15,329.8 | 15,387.2 | 16,661.5 |
| Total Research | 5,601.9 | 5,995.1 | 6,643.6 |
| Basic Research | 2,062.3 | 2,165.0 | 2,399.1 |
| Applied Research | 3,539.7 | 3,830.1 | 4,244.5 |
| Development | 9,727.9 | 9,392.1 | 10,017.9 |
| R&D Plant | 524.4 | 659.1 | 588.3 |
| Research and Development: | | | |
| Performers: | | | |
| Federal intramural* | 3,875.5 | 3,928.7 | 4,139.1 |
| Industrial firms | 7,950.6 | 7,718.1 | 8,504.1 |
| FFRDC's administered by industrial firms | 430.7 | 478.6 | 497.9 |
| Universities and colleges | 1,472.9 | 1,616.6 | 1,826.0 |
| FFRDC's administered by universities and colleges | 749.7 | 762.1 | 778.0 |
| Nonprofit institutions | 462.4 | 470.9 | 483.9 |
| FFRDC's administered by nonprofit institutions | 249.1 | 208.3 | 210.9 |
| Other domestic performers | 98.7 | 136.2 | 145.4 |
| Foreign | 40.2 | 67.7 | 76.1 |
| Research: | | | |
| Performers: | | | |
| Federal intramural* | 2,032.8 | 2,102.0 | 2,223.3 |
| Industrial firms | 1,294.1 | 1,405.0 | 1,674.3 |
| FFRDC's administered by industrial firms | 72.9 | 72.1 | 75.2 |
| Universities and colleges | 1,351.6 | 1,470.7 | 1,668.5 |
| FFRDC's administered by universities and colleges | 417.2 | 428.0 | 435.7 |
| Nonprofit institutions | 268.3 | 302.6 | 330.8 |
| FFRDC's administered by nonprofit institutions | 45.1 | 45.9 | 50.0 |
| Other domestic performers | 88.2 | 113.5 | 123.9 |
| Foreign | 31.8 | 55.3 | 61.8 |
| Field of science: | | | |
| Life sciences | 1,533.4 | 1,735.1 | 1,945.1 |
| Psychology | 113.3 | 125.2 | 140.4 |
| Physical sciences | 1,010.5 | 1,025.5 | 1,086.5 |
| Environmental sciences | 586.6 | 632.1 | 702.0 |
| Mathematics | 102.1 | 104.0 | 111.8 |
| Engineering | 1,967.7 | 2,013.9 | 2,197.7 |
| Social sciences | 215.9 | 273.0 | 311.0 |
| Other sciences | 72.3 | 86.4 | 149.2 |
| Basic Research: | | | |
| Performers: | | | |
| Federal intramural* | 658.3 | 669.1 | 704.8 |
| Industrial firms | 290.1 | 321.1 | 401.3 |
| FFRDC's administered by industrial firms | 29.9 | 30.4 | 32.8 |
| Universities and colleges | 718.4 | 743.6 | 842.9 |
| FFRDC's administered by universities and colleges | 267.4 | 283.0 | 286.1 |

Basic research—Continued

Nonprofit institutions.....
FFRDC's administered by nonprofit institutions.....
Other domestic performers.....
Foreign.....

Field of science:

Life sciences.....
Psychology.....
Physical sciences.....
Environmental sciences.....
Mathematics.....
Engineering.....
Social sciences.....
Other sciences.....

Applied research:

Performers:

Federal intramural*.....
Industrial firms.....
FFRDC's administered by industrial firms.....
Universities and colleges.....
FFRDC's administered by universities and colleges.....
Nonprofit institutions.....
FFRDC's administered by nonprofit institutions.....
Other domestic performers.....
Foreign.....

Field of science:

Life sciences.....
Psychology.....
Physical sciences.....
Environmental sciences.....
Mathematics.....
Engineering.....
Social sciences.....
Other sciences.....

Development:

Performers:

Federal intramural*.....
Industrial firms.....
FFRDC's administered by industrial firms.....
Universities and colleges.....
FFRDC's administered by universities and colleges.....
Nonprofit institutions.....
FFRDC's administered by nonprofit institutions.....
Other domestic performers.....
Foreign.....

R&D Plant:

Performers supported:

Federal intramural.....
Industrial firms.....
FFRDC's administered by industrial firms.....
Universities and colleges.....
FFRDC's administered by universities and colleges.....
Nonprofit institutions.....
FFRDC's administered by nonprofit institutions.....
Other domestic performers.....
Foreign.....

* Intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

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ary of Federal funds for research, development, and R&D plant, fiscal years 1970, 1971, and 1972

(Millions of dollars)

| | Actual 1970 | Estimates | |
|--|----------------|-------------------|-------------------|
| | | 1971 | 1972 |
| AND R&D | 15,735.8 | 15,988.2 | 16,314.8 |
| | 15,157.0 | 15,327.0 | 15,673.0 |
| | 578.9 | 661.1 | 641.8 |
| AND R&D | 15,854.3 | 16,046.3 | 17,249.8 |
| | 15,329.8 | 15,387.2 | 16,661.5 |
| | 5,601.9 | 5,995.1 | 6,643.6 |
| | 2,062.3 | 2,165.0 | 2,399.1 |
| | 3,539.7 | 3,830.1 | 4,244.5 |
| | 9,727.9 | 9,392.1 | 10,017.9 |
| | 524.4 | 659.1 | 588.3 |
| | 3,875.5 | 3,928.7 | 4,139.1 |
| | 7,950.6 | 7,718.1 | 8,504.1 |
| | 430.7 | 478.6 | 497.9 |
| | 1,472.9 | 1,616.6 | 1,826.0 |
| | 749.7 | 762.1 | 778.0 |
| | 462.4 | 470.9 | 483.9 |
| | 249.1 | 208.3 | 210.9 |
| | 98.7 | 136.2 | 145.4 |
| | 40.2 | 67.7 | 76.1 |
| | 2,032.8 | 2,102.0 | 2,223.3 |
| | 1,294.1 | 1,405.0 | 1,674.3 |
| | 72.9 | 72.1 | 75.2 |
| | 1,351.6 | 1,470.7 | 1,668.5 |
| | 417.2 | 428.0 | 435.7 |
| | 268.3 | 302.6 | 330.8 |
| | 45.1 | 45.9 | 50.0 |
| | 88.2 | 113.5 | 123.9 |
| | 31.8 | 55.3 | 61.8 |
| | 1,533.4 | 1,735.1 | 1,945.1 |
| | 113.3 | 125.2 | 140.4 |
| | 1,010.5 | 1,025.5 | 1,086.5 |
| | 586.6 | 632.1 | 702.0 |
| | 102.1 | 104.0 | 111.8 |
| | 1,967.7 | 2,013.9 | 2,197.7 |
| | 215.9 | 273.0 | 311.0 |
| | 72.3 | 86.4 | 149.2 |
| | 658.3 | 669.1 | 704.8 |
| | 290.1 | 321.1 | 401.3 |
| | 29.9 | 30.4 | 32.8 |
| | 718.4 | 743.6 | 842.9 |
| | 267.4 | 283.0 | 286.1 |
| Item | Actual 1970 | Estimates 1971 | Estimates 1972 |
| Basic research—Continued | 59.9 | 65.8 | 73.4 |
| Nonprofit institutions..... | 3.5 | 3.0 | 2.8 |
| FFRDC's administered by nonprofit institutions..... | 20.1 | 27.3 | 31.3 |
| Other domestic performers..... | 14.6 | 21.7 | 23.8 |
| Foreign..... | | | |
| Field of science: | 576.0 | 631.2 | 735.3 |
| Life sciences..... | 57.2 | 60.2 | 66.0 |
| Psychology..... | 704.5 | 725.5 | 730.0 |
| Physical sciences..... | 352.4 | 361.6 | 419.3 |
| Environmental sciences..... | 58.9 | 53.1 | 58.2 |
| Mathematics..... | 242.6 | 239.7 | 248.0 |
| Engineering..... | 66.1 | 81.4 | 99.9 |
| Social sciences..... | 4.5 | 12.4 | 42.5 |
| Other sciences..... | | | |
| Applied research: | | | |
| Performers: | 1,374.5 | 1,432.9 | 1,518.5 |
| Federal intramural*..... | 1,004.0 | 1,083.9 | 1,273.1 |
| Industrial firms..... | 43.0 | 41.7 | 42.4 |
| FFRDC's administered by industrial firms..... | 633.2 | 727.1 | 825.6 |
| Universities and colleges..... | 149.8 | 145.0 | 149.7 |
| FFRDC's administered by universities and colleges..... | 208.4 | 236.8 | 257.4 |
| Nonprofit institutions..... | 41.5 | 42.8 | 47.3 |
| FFRDC's administered by nonprofit institutions..... | 68.1 | 86.2 | 92.6 |
| Other domestic performers..... | 17.1 | 33.6 | 38.0 |
| Foreign..... | | | |
| Field of science: | 1,057.4 | 1,104.0 | 1,209.8 |
| Life sciences..... | 56.1 | 65.0 | 74.4 |
| Psychology..... | 306.0 | 299.9 | 356.5 |
| Physical sciences..... | 234.3 | 270.5 | 282.7 |
| Environmental sciences..... | 43.2 | 50.9 | 53.6 |
| Mathematics..... | 1,725.1 | 1,774.2 | 1,949.7 |
| Engineering..... | 149.7 | 191.6 | 211.2 |
| Social sciences..... | 67.9 | 74.0 | 106.6 |
| Other sciences..... | | | |
| Development: | | | |
| Performers: | 1,842.7 | 1,826.7 | 1,915.8 |
| Federal intramural*..... | 6,656.5 | 6,313.1 | 6,829.7 |
| Industrial firms..... | 357.8 | 406.5 | 422.7 |
| FFRDC's administered by industrial firms..... | 121.3 | 145.9 | 157.5 |
| Universities and colleges..... | 332.5 | 334.1 | 342.3 |
| FFRDC's administered by universities and colleges..... | 194.1 | 168.3 | 153.2 |
| Nonprofit institutions..... | 204.0 | 162.5 | 160.8 |
| FFRDC's administered by nonprofit institutions..... | 10.5 | 22.6 | 21.5 |
| Other domestic performers..... | 8.5 | 12.4 | 14.3 |
| Foreign..... | | | |
| R&D Plant: | | | |
| Performers supported: | 166.0 | 236.2 | 289.2 |
| Federal intramural..... | 41.4 | 71.5 | 52.2 |
| Industrial firms..... | 60.9 | 123.1 | 74.3 |
| FFRDC's administered by industrial firms..... | 56.1 | 46.6 | 32.4 |
| Universities and colleges..... | 169.0 | 175.7 | 133.9 |
| FFRDC's administered by universities and colleges..... | 4.7 | 3.4 | 3.6 |
| Nonprofit institutions..... | 24.1 | 1.8 | 1.8 |
| FFRDC's administered by nonprofit institutions..... | 2.1 | .1 | .1 |
| Other domestic performers..... | .1 | .7 | .7 |
| Foreign..... | | | |

intramural and extramural programs by Federal personnel as well as actual intramural performance.

TABLE C-2. FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND RED PLANT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972
(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | OBLIGATIONS | | | EXPENDITURES | | |
|--|--------------|-----------|----------|--------------|-----------|----------|
| | ACTUAL, 1970 | ESTIMATES | | ACTUAL, 1970 | ESTIMATES | |
| | | 1971 | 1972 | | 1971 | 1972 |
| TOTAL, ALL AGENCIES..... | 15,854.3 | 16,046.3 | 17,249.8 | 15,735.8 | 15,988.2 | 16,314.8 |
| DEPARTMENTS | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 286.4 | 311.7 | 317.7 | 298.6 | 316.2 | 322.0 |
| AGRICULTURAL RESEARCH SERVICE..... | 164.0 | 180.0 | 180.5 | 172.6 | 178.9 | 181.9 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 62.1 | 67.0 | 73.6 | 62.5 | 70.7 | 73.8 |
| ECONOMIC RESEARCH SERVICE..... | 14.9 | 15.7 | 15.4 | 15.8 | 15.2 | 14.9 |
| FARMER COOPERATIVE SERVICE..... | .9 | .9 | .9 | .9 | 1.0 | 1.0 |
| FOREST SERVICE..... | 43.7 | 47.1 | 46.3 | 45.8 | 49.4 | 49.4 |
| NATIONAL AGRICULTURAL LIBRARY..... | .2 | .3 | .3 | .3 | .3 | .3 |
| STATISTICAL REPORTING SERVICE..... | .7 | .7 | .7 | .7 | .7 | .7 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 125.5 | 166.4 | 185.3 | 127.9 | 144.5 | 163.0 |
| BUREAU OF THE CENSUS..... | 3.0 | 4.3 | 3.5 | 3.0 | 4.3 | 3.5 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 8.8 | 5.4 | 5.1 | 10.4 | 5.7 | 5.4 |
| MARITIME ADMINISTRATION..... | 12.6 | 24.3 | 26.0 | 6.9 | 12.1 | 22.0 |
| NATIONAL BUREAU OF STANDARDS..... | 30.8 | 35.4 | 34.8 | 31.3 | 34.1 | 35.9 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 66.4 | 89.7 | 105.8 | 72.3 | 81.8 | 86.4 |
| OFFICE OF BUSINESS ECONOMICS..... | 3.5 | 4.0 | 4.5 | 3.7 | 3.8 | 4.4 |
| OFFICE OF TELECOMMUNICATIONS..... | - | 2.6 | 5.0 | - | 2.3 | 4.9 |
| PATENT OFFICE..... | .4 | .6 | .6 | .4 | .5 | .6 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 7,500.9 | 7,582.0 | 8,492.4 | 7,587.9 | 7,726.8 | 7,912.8 |
| DEPARTMENT OF THE ARMY..... | 1,687.0 | 1,729.3 | 2,108.7 | 1,771.6 | 1,767.1 | 1,893.6 |
| MILITARY FUNCTIONS..... | 1,677.1 | 1,719.5 | 2,096.2 | 1,762.1 | 1,757.7 | 1,880.0 |
| ROTC APPROPRIATIONS..... | 1,576.3 | 1,606.0 | 1,995.0 | 1,665.5 | 1,638.0 | 1,778.0 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN RED..... | 79.4 | 82.0 | 73.0 | 80.7 | 79.9 | 72.9 |
| MILITARY CONSTRUCTION..... | 21.5 | 31.4 | 28.3 | 15.9 | 39.8 | 79.1 |
| CIVIL FUNCTIONS..... | 9.9 | 9.8 | 12.5 | 9.5 | 9.4 | 13.6 |
| DEPARTMENT OF THE NAVY..... | 2,276.1 | 2,273.4 | 2,553.0 | 2,172.4 | 2,271.0 | 2,351.5 |
| ROTC APPROPRIATIONS..... | 2,191.0 | 2,173.0 | 2,453.0 | 2,084.2 | 2,177.0 | 2,260.0 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN RED..... | 73.4 | 71.3 | 67.7 | 73.4 | 71.2 | 67.5 |
| MILITARY CONSTRUCTION..... | 10.6 | 28.2 | 29.1 | 14.2 | 21.8 | 22.9 |
| SPECIAL FOREIGN CURRENCY PROGRAM..... | 1.1 | .9 | 3.2 | .6 | .9 | 1.7 |
| DEPARTMENT OF THE AIR FORCE..... | 3,049.1 | 3,075.3 | 3,265.4 | 3,150.1 | 3,173.5 | 3,139.2 |
| ROTC APPROPRIATIONS..... | 2,838.6 | 2,864.0 | 3,068.0 | 2,937.1 | 2,963.0 | 2,967.0 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN RED..... | 202.5 | 194.3 | 171.8 | 202.5 | 194.3 | 171.8 |
| MILITARY CONSTRUCTION..... | 8.0 | 16.5 | 25.6 | 10.4 | 16.0 | 20.4 |
| SPECIAL FOREIGN CURRENCY PROGRAM..... | .1 | .4 | - | .1 | .1 | .1 |
| DEFENSE AGENCIES..... | 484.6 | 450.5 | 511.7 | 488.0 | 495.7 | 479.6 |

TABLE C-2. FEDERAL FUNDS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972
CONTINUED
(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | OBLIGATIONS | | | EXPENDITURES | | |
|---|--------------|-----------|---------|--------------|-----------|---------|
| | ACTUAL, 1970 | ESTIMATES | | ACTUAL, 1970 | ESTIMATES | |
| | | 1971 | 1972 | | 1971 | 1972 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 8.6 | 10.1 | 23.9 | 3.6 | 12.6 | 20.0 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS..... | .8 | 1.6 | 2.2 | .8 | 1.4 | 2.1 |
| BUREAU OF PRISONS..... | .2 | .2 | .3 | .2 | .2 | .2 |
| FEDERAL BUREAU OF INVESTIGATION..... | .2 | .8 | .5 | .2 | .6 | .6 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | 7.4 | 7.5 | 21.0 | 2.5 | 10.3 | 17.1 |
| DEPARTMENT OF LABOR, TOTAL..... | 20.6 | 24.5 | 24.9 | 19.8 | 23.9 | 24.6 |
| BUREAU OF LABOR STATISTICS..... | 3.8 | 3.8 | 3.8 | 3.8 | 3.7 | 3.7 |
| LABOR-MANAGEMENT SERVICES ADMINISTRATION..... | .3 | .7 | .8 | .3 | .7 | .8 |
| MANPOWER ADMINISTRATION..... | 14.3 | 17.4 | 17.7 | 13.7 | 16.9 | 17.5 |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2.2 | 2.6 | 2.5 | 2.0 | 2.5 | 2.5 |
| POSTAL SERVICE..... | 38.7 | 46.3 | 76.7 | 29.8 | 38.3 | 46.3 |
| DEPARTMENT OF STATE, TOTAL..... | 27.6 | 40.8 | 44.4 | 21.5 | 27.6 | 30.7 |
| DEPARTMENTAL FUNDS..... | .1 | .4 | .7 | .1 | .4 | .7 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 27.3 | 40.3 | 43.7 | 21.0 | 27.0 | 30.0 |
| PEACE CORPS..... | .1 | .1 | - | .4 | .2 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 322.8 | 456.2 | 525.8 | 262.6 | 416.2 | 561.0 |
| FEDERAL AVIATION ADMINISTRATION..... | 56.3 | 79.3 | 84.1 | 53.9 | 58.2 | 96.8 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 32.9 | 32.7 | 38.2 | 32.5 | 34.8 | 40.2 |
| FEDERAL RAILROAD ADMINISTRATION..... | 16.4 | 33.2 | 42.7 | 11.4 | 18.3 | 31.7 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION..... | 19.5 | 16.7 | 27.5 | 19.5 | 16.7 | 27.5 |
| OFFICE OF THE SECRETARY..... | 169.5 | 249.1 | 266.0 | 118.7 | 245.5 | 295.5 |
| UNITED STATES COAST GUARD..... | 18.7 | 25.8 | 42.0 | 17.1 | 23.5 | 44.0 |
| URBAN MASS TRANSPORTATION ADMINISTRATION..... | 9.5 | 19.4 | 25.4 | 9.5 | 19.4 | 25.4 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | .6 | 1.0 | .9 | .6 | 1.0 | .9 |
| BUREAU OF ENGRAVING AND PRINTING..... | .6 | 1.0 | .9 | .6 | 1.0 | .9 |
| OTHER AGENCIES | | | | | | |
| ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS..... | .6 | .5 | .5 | .6 | .5 | .5 |
| ATOMIC ENERGY COMMISSION..... | 1,611.9 | 1,660.0 | 1,494.3 | 1,616.0 | 1,618.9 | 1,523.0 |
| CIVIL AERONAUTICS BOARD..... | .3 | .3 | .3 | .3 | .3 | .3 |
| CIVIL SERVICE COMMISSION..... | .4 | .5 | .5 | .4 | .5 | .5 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 90.5 | 121.0 | 166.7 | 70.2 | 91.5 | 111.1 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1.0 | .6 | .9 | 1.0 | .7 | .7 |
| FEDERAL HOME LOAN BANK BOARD..... | .4 | .4 | .5 | .4 | .4 | .5 |
| FEDERAL TRADE COMMISSION..... | .4 | .5 | .5 | .4 | .5 | .5 |
| GENERAL SERVICES ADMINISTRATION..... | .3 | .3 | .2 | .3 | .3 | .2 |
| LIBRARY OF CONGRESS..... | 1.9 | 2.5 | 3.9 | 1.9 | 2.1 | 3.9 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 3,833.4 | 3,272.7 | 3,244.8 | 3,753.1 | 3,368.9 | 3,152.4 |
| NATIONAL SCIENCE FOUNDATION..... | 312.3 | 366.6 | 513.2 | 324.1 | 359.7 | 430.6 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 123.4 | 115.6 | 100.0 | 79.3 | 90.8 | 95.0 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 1.0 | 1.0 | .5 | .7 | 1.6 | .5 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 1.9 | 2.0 | 2.2 | 1.9 | 2.0 | 2.2 |
| SMALL BUSINESS ADMINISTRATION..... | .1 | - | .2 | .1 | .1 | .1 |
| SMITHSONIAN INSTITUTION..... | 18.3 | 20.9 | 27.2 | 20.3 | 23.7 | 29.7 |
| TENNESSEE VALLEY AUTHORITY..... | 8.2 | 9.4 | 10.4 | 8.2 | 9.4 | 10.4 |
| UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY..... | 4.2 | 3.1 | 3.5 | 5.9 | 4.2 | 4.0 |
| UNITED STATES INFORMATION AGENCY..... | .2 | .2 | .2 | .2 | .2 | .2 |
| VETERANS ADMINISTRATION..... | 61.2 | 76.6 | 63.2 | 61.7 | 67.0 | 71.7 |

TABLE C-3. FEDERAL FUNDS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972
(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | OBLIGATIONS | | | EXPENDITURES | | |
|--|--------------|-----------|----------|--------------|-----------|----------|
| | ACTUAL, 1970 | ESTIMATES | | ACTUAL, 1970 | ESTIMATES | |
| | | 1971 | 1972 | | 1971 | 1972 |
| TOTAL, ALL AGENCIES..... | 15,329.8 | 15,387.2 | 16,661.5 | 15,157.0 | 15,327.0 | 15,673.0 |
| DEPARTMENTS | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 281.2 | 302.8 | 314.0 | 285.0 | 306.3 | 311.4 |
| AGRICULTURAL RESEARCH SERVICE..... | 160.6 | 172.3 | 176.8 | 161.3 | 172.1 | 172.6 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 61.1 | 67.0 | 73.6 | 61.4 | 69.4 | 73.2 |
| ECONOMIC RESEARCH SERVICE..... | 14.9 | 15.7 | 15.4 | 15.8 | 15.2 | 14.9 |
| FARMER COOPERATIVE SERVICE..... | .9 | .9 | .9 | .9 | 1.0 | 1.0 |
| FOREST SERVICE..... | 42.8 | 45.9 | 46.3 | 44.9 | 47.7 | 48.6 |
| NATIONAL AGRICULTURAL LIBRARY..... | .2 | .3 | .3 | .3 | .3 | .3 |
| STATISTICAL REPORTING SERVICE..... | .7 | .7 | .7 | .7 | .7 | .7 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 121.6 | 157.9 | 181.7 | 122.9 | 137.9 | 157.4 |
| BUREAU OF THE CENSUS..... | 3.0 | 4.3 | 3.5 | 3.0 | 4.3 | 3.5 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 8.8 | 5.4 | 5.1 | 10.4 | 5.7 | 5.4 |
| MARITIME ADMINISTRATION..... | 12.6 | 24.3 | 26.0 | 6.9 | 12.1 | 22.0 |
| NATIONAL BUREAU OF STANDARDS..... | 29.6 | 31.7 | 34.1 | 29.1 | 31.3 | 33.9 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 63.8 | 85.0 | 102.9 | 69.4 | 78.0 | 82.7 |
| OFFICE OF BUSINESS ECONOMICS..... | 3.5 | 4.0 | 4.5 | 3.7 | 3.8 | 4.4 |
| OFFICE OF TELECOMMUNICATIONS..... | - | 2.6 | 5.0 | - | 2.3 | 4.9 |
| PATENT OFFICE..... | .4 | .6 | .6 | .4 | .5 | .6 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 7,360.4 | 7,420.2 | 8,332.0 | 7,447.1 | 7,563.6 | 7,758.7 |
| DEPARTMENT OF THE ARMY..... | 1,659.8 | 1,691.1 | 2,071.4 | 1,753.5 | 1,720.7 | 1,855.6 |
| MILITARY FUNCTIONS..... | 1,650.3 | 1,681.6 | 2,059.3 | 1,744.0 | 1,711.4 | 1,842.9 |
| ROTC&E APPROPRIATIONS..... | 1,571.0 | 1,599.6 | 1,986.4 | 1,663.3 | 1,631.5 | 1,770.0 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN REG..... | 79.4 | 82.0 | 73.0 | 80.7 | 79.9 | 72.9 |
| CIVIL FUNCTIONS..... | 9.5 | 9.5 | 12.1 | 9.5 | 9.3 | 12.6 |
| DEPARTMENT OF THE NAVY..... | 2,257.9 | 2,236.9 | 2,515.3 | 2,150.8 | 2,241.0 | 2,320.3 |
| ROTC&E APPROPRIATIONS..... | 2,183.4 | 2,164.7 | 2,444.4 | 2,076.8 | 2,168.8 | 2,251.6 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN REG..... | 73.4 | 71.3 | 67.7 | 73.4 | 71.2 | 67.5 |
| SPECIAL FOREIGN CURRENCY PROGRAM..... | 1.1 | .9 | 3.2 | .6 | .9 | 1.2 |
| DEPARTMENT OF THE AIR FORCE..... | 2,990.0 | 3,024.6 | 3,209.0 | 3,088.5 | 3,123.3 | 3,088.1 |
| ROTC&E APPROPRIATIONS..... | 2,787.4 | 2,829.9 | 3,037.2 | 2,886.0 | 2,928.9 | 2,916.2 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN REG..... | 202.5 | 194.3 | 171.8 | 202.5 | 194.3 | 171.8 |
| SPECIAL FOREIGN CURRENCY PROGRAM..... | .1 | .4 | - | .1 | .1 | .1 |
| DEFENSE AGENCIES..... | 448.6 | 414.0 | 482.6 | 448.4 | 459.1 | 446.0 |
| ROTC&E APPROPRIATIONS..... | 442.6 | 409.3 | 478.2 | 442.4 | 454.3 | 441.5 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN REG..... | 5.9 | 4.7 | 4.4 | 5.9 | 4.7 | 4.4 |
| DEPARTMENTWIDE FUNDS..... | 4.1 | 53.6 | 53.7 | 5.9 | 19.6 | 48.8 |

| NATIONAL AGRICULTURAL LIBRARY STATISTICAL REPORTING SERVICE..... | .2 .7 | .5 .7 | .3 .7 | .3 .7 | .3 .7 | .3 .7 |
|---|----------|----------|----------|----------|----------|----------|
| DEPARTMENT OF COMMERCE, TOTAL..... | 121.6 | 157.9 | 181.7 | 122.9 | 137.9 | 157.4 |
| BUREAU OF THE CENSUS..... | 3.0 | 4.3 | 3.5 | 3.0 | 4.3 | 3.5 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 8.8 | 5.4 | 5.1 | 10.4 | 5.7 | 5.4 |
| MARITIME ADMINISTRATION..... | 12.6 | 24.3 | 26.0 | 6.9 | 12.1 | 22.0 |
| NATIONAL BUREAU OF STANDARDS..... | 29.6 | 31.7 | 34.1 | 29.1 | 31.3 | 33.9 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 63.8 | 85.0 | 102.9 | 69.4 | 78.0 | 82.7 |
| OFFICE OF BUSINESS ECONOMICS..... | 3.5 | 4.0 | 4.5 | 3.7 | 3.8 | 4.4 |
| OFFICE OF TELECOMMUNICATIONS..... | - | 2.6 | 5.0 | - | 2.3 | 4.9 |
| PATENT OFFICE..... | .4 | .6 | .6 | .4 | .5 | .6 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 7,360.4 | 7,420.2 | 8,332.0 | 7,447.1 | 7,563.6 | 7,758.7 |
| DEPARTMENT OF THE ARMY..... | 1,659.8 | 1,691.1 | 2,071.4 | 1,753.5 | 1,720.7 | 1,855.6 |
| MILITARY FUNCTIONS..... | 1,650.3 | 1,681.6 | 2,059.3 | 1,744.0 | 1,711.4 | 1,842.9 |
| ROD&E APPROPRIATIONS..... | 1,571.0 | 1,599.6 | 1,986.4 | 1,663.3 | 1,631.5 | 1,770.0 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D..... | 79.4 | 82.0 | 73.0 | 80.7 | 79.9 | 72.9 |
| CIVIL FUNCTIONS..... | 9.5 | 9.5 | 12.1 | 9.5 | 9.3 | 12.6 |
| DEPARTMENT OF THE NAVY..... | 2,257.9 | 2,236.9 | 2,515.3 | 2,150.8 | 2,241.0 | 2,320.3 |
| ROD&E APPROPRIATIONS..... | 2,183.4 | 2,164.7 | 2,444.4 | 2,076.8 | 2,168.8 | 2,251.6 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D..... | 73.4 | 71.3 | 67.7 | 73.4 | 71.2 | 67.5 |
| SPECIAL FOREIGN CURRENCY PROGRAM..... | 1.1 | .9 | 3.2 | .6 | .9 | 1.2 |
| DEPARTMENT OF THE AIR FORCE..... | 2,990.0 | 3,024.6 | 3,209.0 | 3,088.5 | 3,123.3 | 3,088.1 |
| ROD&E APPROPRIATIONS..... | 2,787.4 | 2,829.9 | 3,037.2 | 2,886.0 | 2,928.9 | 2,916.2 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D..... | 202.5 | 194.3 | 171.8 | 202.5 | 194.3 | 171.8 |
| SPECIAL FOREIGN CURRENCY PROGRAM..... | .1 | .4 | - | .1 | .1 | .1 |
| DEFENSE AGENCIES..... | 448.6 | 414.0 | 482.6 | 448.4 | 459.1 | 446.0 |
| ROD&E APPROPRIATIONS..... | 442.6 | 409.3 | 478.2 | 442.4 | 454.3 | 441.5 |
| PAY AND ALLOWANCES OF MILITARY PERSONNEL IN R&D..... | 5.9 | 4.7 | 4.4 | 5.9 | 4.7 | 4.4 |
| DEPARTMENTWIDE FUNDS..... | 4.1 | 53.6 | 53.7 | 5.9 | 19.6 | 48.8 |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 1,221.0 | 1,479.9 | 1,635.4 | 1,217.9 | 1,336.7 | 1,475.7 |
| FOOD AND DRUG ADMINISTRATION..... | 21.8 | 25.9 | 33.9 | 18.7 | 22.6 | 29.0 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 188.4 | 227.7 | 229.5 | 180.2 | 203.2 | 217.5 |
| NATIONAL INSTITUTES OF HEALTH..... | 873.3 | 1,038.5 | 1,168.5 | 876.6 | 964.7 | 1,042.8 |
| OFFICE OF CHILD DEVELOPMENT..... | 2.0 | 5.5 | 16.5 | 1.0 | 2.5 | 10.5 |
| OFFICE OF EDUCATION..... | 88.2 | 133.2 | 138.4 | 92.7 | 96.2 | 134.0 |
| SOCIAL AND REHABILITATION SERVICE..... | 34.9 | 35.6 | 34.4 | 36.6 | 34.5 | 28.5 |
| SOCIAL SECURITY ADMINISTRATION..... | 12.4 | 13.5 | 14.3 | 12.2 | 13.0 | 13.3 |
| DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT..... | 29.9 | 49.4 | 49.0 | 15.3 | 53.9 | 48.9 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 157.9 | 185.1 | 204.3 | 151.6 | 180.7 | 193.7 |
| BONNEVILLE POWER ADMINISTRATION..... | 1.8 | 2.7 | 3.1 | 2.1 | 2.7 | 3.0 |
| BUREAU OF LAND MANAGEMENT..... | .7 | .8 | .8 | .7 | .8 | .8 |
| BUREAU OF MINES..... | 46.5 | 58.0 | 66.8 | 37.3 | 58.2 | 66.6 |
| BUREAU OF OUTDOOR RECREATION..... | .1 | .1 | .1 | .1 | .1 | .1 |
| BUREAU OF RECLAMATION..... | 7.3 | 9.1 | 9.6 | 7.5 | 9.6 | 9.6 |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | 20.0 | 22.2 | 23.2 | 18.0 | 19.7 | 19.7 |
| GEOLOGICAL SURVEY..... | 41.0 | 43.2 | 48.5 | 40.8 | 42.8 | 47.5 |
| OFFICE OF COAL RESEARCH..... | 5.7 | 12.4 | 12.3 | 10.3 | 8.5 | 9.0 |
| OFFICE OF SALINE WATER..... | 24.1 | 23.4 | 24.8 | 23.3 | 27.0 | 24.3 |
| OFFICE OF THE SECRETARY..... | - | .8 | 1.6 | - | .5 | 1.5 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 10.8 | 12.4 | 13.5 | 11.4 | 10.9 | 11.7 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 8.6 | 10.1 | 23.9 | 3.6 | 12.6 | 20.0 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS..... | .8 | 1.6 | 2.2 | .8 | 1.4 | 2.1 |
| BUREAU OF PRISONS..... | .2 | .2 | .3 | .2 | .2 | .2 |
| FEDERAL BUREAU OF INVESTIGATION..... | .2 | .8 | .5 | .2 | .6 | .6 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | 7.4 | 7.5 | 21.0 | 2.5 | 10.3 | 17.1 |

CONTINUED ON NEXT PAGE

TABLE C-3. FEDERAL FUNDS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972
CONTINUED
(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | OBLIGATIONS | | | EXPENDITURES | | |
|---|--------------|-----------|---------|--------------|-----------|---------|
| | ACTUAL, 1970 | ESTIMATES | | ACTUAL, 1970 | ESTIMATES | |
| | | 1971 | 1972 | | 1971 | 1972 |
| DEPARTMENT OF LABOR, TOTAL..... | 20.6 | 24.5 | 24.9 | 19.8 | 23.9 | 24.6 |
| BUREAU OF LABOR STATISTICS..... | 3.8 | 3.8 | 3.8 | 3.8 | 3.7 | 3.7 |
| LABOR-MANAGEMENT SERVICES ADMINISTRATION..... | .3 | .7 | .8 | .3 | .7 | .8 |
| MANPOWER ADMINISTRATION..... | 14.3 | 17.4 | 17.7 | 13.7 | 16.9 | 17.5 |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2.2 | 2.6 | 2.5 | 2.0 | 2.5 | 2.5 |
| POSTAL SERVICE..... | 38.7 | 45.1 | 76.3 | 29.7 | 37.2 | 45.9 |
| DEPARTMENT OF STATE, TOTAL..... | 27.6 | 40.5 | 44.1 | 21.4 | 27.3 | 30.5 |
| DEPARTMENTAL FUNDS..... | .1 | .4 | .7 | .1 | .4 | .7 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 27.3 | 40.0 | 43.5 | 20.9 | 26.7 | 29.8 |
| PEACE CORPS..... | .1 | .1 | - | .4 | .2 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 317.3 | 436.7 | 483.2 | 258.9 | 403.6 | 526.8 |
| FEDERAL AVIATION ADMINISTRATION..... | 56.1 | 79.0 | 81.5 | 53.7 | 57.9 | 94.3 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 32.8 | 32.3 | 37.8 | 32.4 | 34.4 | 39.8 |
| FEDERAL RAILROAD ADMINISTRATION..... | 11.5 | 19.7 | 18.3 | 8.4 | 11.6 | 15.6 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION..... | 19.5 | 16.7 | 27.5 | 19.5 | 16.7 | 27.5 |
| OFFICE OF THE SECRETARY..... | 169.5 | 249.1 | 266.0 | 118.7 | 245.5 | 295.5 |
| UNITED STATES COAST GUARD..... | 18.4 | 25.6 | 31.8 | 16.7 | 23.3 | 33.9 |
| URBAN MASS TRANSPORTATION ADMINISTRATION..... | 9.5 | 14.3 | 20.4 | 9.5 | 14.3 | 20.4 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | .6 | .9 | .9 | .6 | .9 | .9 |
| BUREAU OF ENGRAVING AND PRINTING..... | .6 | .9 | .9 | .6 | .9 | .9 |
| OTHER AGENCIES | | | | | | |
| ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS..... | .6 | .5 | .5 | .6 | .5 | .5 |
| ATOMIC ENERGY COMMISSION..... | 1,346.0 | 1,306.6 | 1,251.4 | 1,346.0 | 1,306.6 | 1,251.4 |
| CIVIL AERONAUTICS BOARD..... | .3 | .3 | .3 | .3 | .3 | .3 |
| CIVIL SERVICE COMMISSION..... | .4 | .5 | .5 | .4 | .5 | .5 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 88.5 | 116.2 | 144.4 | 68.1 | 89.0 | 104.2 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1.0 | .6 | .9 | 1.0 | .7 | .7 |
| FEDERAL HOME LOAN BANK BOARD..... | .4 | .4 | .5 | .4 | .4 | .5 |
| FEDERAL RESERVE BOARD..... | .4 | .5 | .5 | .4 | .5 | .5 |
| FEDERAL TRADE COMMISSION..... | .3 | .3 | .3 | .3 | .3 | .3 |
| GENERAL SERVICES ADMINISTRATION..... | 1.9 | 2.5 | 3.9 | 1.9 | 2.1 | 3.9 |
| LIBRARY OF CONGRESS..... | 3,799.9 | 3,247.7 | 3,188.5 | 3,696.5 | 3,318.4 | 3,109.4 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 289.0 | 345.0 | 494.3 | 292.9 | 330.4 | 403.0 |
| NATIONAL SCIENCE FOUNDATION..... | 123.4 | 115.6 | 100.0 | 79.3 | 90.8 | 95.0 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 1.0 | 1.0 | .5 | .7 | 1.6 | .5 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 1.9 | 2.0 | 2.2 | 1.9 | 2.0 | 2.2 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | .1 | - | .2 | .1 | .1 | .1 |
| SMALL BUSINESS ADMINISTRATION..... | 18.2 | 20.3 | 27.2 | 20.1 | 23.5 | 29.3 |
| SMITHSONIAN INSTITUTION..... | 8.2 | 9.3 | 10.2 | 8.2 | 9.3 | 10.2 |
| TENNESSEE VALLEY AUTHORITY..... | 4.2 | 3.1 | 3.5 | 5.9 | 4.2 | 4.0 |
| UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY..... | .2 | .2 | .2 | .2 | .2 | .2 |
| UNITED STATES INFORMATION AGENCY..... | 58.6 | 61.6 | 61.9 | 58.0 | 61.2 | 61.9 |
| VETERANS ADMINISTRATION..... | | | | | | |

TABLE C-4. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK,
FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | RESEARCH | | DEVELOPMENT |
|--|------------|-----------|-----------|-------------|
| | | BASIC | APPLIED | |
| TOTAL, ALL AGENCIES..... | 15,329,816 | 2,062,256 | 3,539,650 | 9,727,910 |
| DEPARTMENTS | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 281,157 | 115,709 | 156,216 | 9,232 |
| AGRICULTURAL RESEARCH SERVICE..... | 160,635 | 73,342 | 79,126 | 8,167 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 61,052 | 23,200 | 37,852 | - |
| ECONOMIC RESEARCH SERVICE..... | 14,904 | 4,322 | 10,582 | - |
| FARMER COOPERATIVE SERVICE..... | 884 | 221 | 663 | - |
| FOREST SERVICE..... | 42,789 | 14,548 | 27,385 | 856 |
| NATIONAL AGRICULTURAL LIBRARY..... | 208 | - | 208 | - |
| STATISTICAL REPORTING SERVICE..... | 685 | 76 | 400 | 209 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 121,571 | 39,201 | 54,913 | 27,457 |
| BUREAU OF THE CENSUS..... | 3,038 | 308 | 1,357 | 1,373 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 8,762 | - | 3,809 | 4,953 |
| MARITIME ADMINISTRATION..... | 12,551 | - | 4,878 | 7,673 |
| NATIONAL BUREAU OF STANDARDS..... | 29,565 | 14,350 | 12,705 | 2,510 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 63,753 | 21,038 | 31,877 | 10,838 |
| OFFICE OF BUSINESS ECONOMICS..... | 3,505 | 3,505 | - | - |
| PATENT OFFICE..... | 397 | - | 287 | 110 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 7,360,368 | 246,670 | 1,310,113 | 5,803,585 |
| DEPARTMENT OF THE ARMY..... | 1,659,818 | 45,451 | 246,085 | 1,368,282 |
| DEPARTMENT OF THE NAVY..... | 2,257,908 | 81,944 | 190,978 | 1,984,986 |
| DEPARTMENT OF THE AIR FORCE..... | 2,989,957 | 81,000 | 584,000 | 2,324,957 |
| DEFENSE AGENCIES..... | 448,594 | 38,275 | 284,959 | 125,360 |
| DEPARTMENT-WIDE FUNDS..... | 4,091 | - | 4,091 | - |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 1,220,975 | 387,940 | 741,331 | 91,704 |
| FOOD AND DRUG ADMINISTRATION..... | 21,805 | - | 21,805 | - |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 188,412 | 60,340 | 100,018 | 28,054 |
| NATIONAL INSTITUTES OF HEALTH..... | 873,273 | 319,385 | 549,403 | 4,485 |
| OFFICE OF CHILD DEVELOPMENT..... | 2,000 | - | 1,000 | 1,000 |
| OFFICE OF EDUCATION..... | 88,181 | 7,812 | 25,254 | 55,115 |
| SOCIAL AND REHABILITATION SERVICE..... | 34,935 | - | 31,885 | 3,050 |
| SOCIAL SECURITY ADMINISTRATION..... | 12,369 | 403 | 11,966 | - |
| DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT..... | 29,940 | - | 7,097 | 22,843 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 157,908 | 49,923 | 71,769 | 36,216 |
| BONNEVILLE POWER ADMINISTRATION..... | 1,793 | - | 524 | 1,269 |
| BUREAU OF LAND MANAGEMENT..... | 732 | 15 | 695 | 22 |
| BUREAU OF MINES..... | 46,457 | 6,248 | 27,646 | 12,563 |
| BUREAU OF OUTDOOR RECREATION..... | 92 | - | 92 | - |
| BUREAU OF RECLAMATION..... | 7,310 | 82 | 7,120 | 108 |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | 20,008 | 8,459 | 9,582 | 1,967 |
| GEOLOGICAL SURVEY..... | 40,963 | 30,667 | 10,296 | - |
| OFFICE OF COAL RESEARCH..... | 5,671 | - | 2,341 | 3,330 |
| OFFICE OF SALINE WATER..... | 24,132 | 2,174 | 5,001 | 16,957 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 10,750 | 2,278 | 8,472 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 8,590 | - | 5,334 | 3,256 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS..... | 839 | - | 839 | - |
| BUREAU OF PRISONS..... | 200 | - | - | 200 |
| FEDERAL BUREAU OF INVESTIGATION..... | 197 | - | - | 197 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | 7,354 | - | 4,495 | 2,859 |

CONTINUED ON NEXT PAGE

TABLE C-4. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

CONTINUED

| AGENCY AND SUBDIVISION | TOTAL | RESEARCH | | DEVELOPMENT |
|---|-----------|----------|---------|-------------|
| | | BASIC | APPLIED | |
| DEPARTMENT OF LABOR, TOTAL..... | 20,587 | 2,052 | 9,234 | 9,301 |
| BUREAU OF LABOR STATISTICS..... | 3,815 | 1,422 | 1,144 | 1,249 |
| LABOR-MANAGEMENT SERVICES ADMINISTRATION..... | 290 | 290 | - | - |
| MANPOWER ADMINISTRATION..... | 14,266 | 340 | 5,874 | 8,052 |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,216 | - | 2,216 | - |
| POSTAL SERVICE..... | 38,680 | - | 4,577 | 34,103 |
| DEPARTMENT OF STATE, TOTAL..... | 27,558 | - | 18,895 | 8,663 |
| DEPARTMENTAL FUNDS..... | 125 | - | 125 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 27,288 | - | 18,627 | 8,661 |
| PEACE CORPS..... | 145 | - | 143 | 2 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 317,322 | 21,099 | 67,164 | 229,059 |
| FEDERAL AVIATION ADMINISTRATION..... | 56,087 | - | 9,960 | 46,127 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 32,845 | 7,390 | 21,218 | 4,237 |
| FEDERAL RAILROAD ADMINISTRATION..... | 11,540 | - | 4,743 | 6,797 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION..... | 19,492 | 1,127 | 14,765 | 3,600 |
| OFFICE OF THE SECRETARY..... | 169,476 | - | 8,956 | 160,520 |
| UNITED STATES COAST GUARD..... | 18,389 | 11,080 | 2,801 | 4,508 |
| URBAN MASS TRANSPORTATION ADMINISTRATION..... | 9,493 | 1,502 | 4,721 | 3,270 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 610 | - | 286 | 324 |
| BUREAU OF ENGRAVING AND PRINTING..... | 610 | - | 286 | 324 |
| OTHER AGENCIES | | | | |
| ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS..... | 553 | - | 553 | - |
| ATOMIC ENERGY COMMISSION..... | 1,345,989 | 286,669 | 146,448 | 912,872 |
| CIVIL AERONAUTICS BOARD..... | 263 | - | 263 | - |
| CIVIL SERVICE COMMISSION..... | 448 | 83 | 196 | 169 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 88,506 | 5,450 | 47,534 | 35,522 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1,015 | - | 1,015 | - |
| FEDERAL HOME LOAN BANK BOARD..... | 390 | - | 390 | - |
| FEDERAL TRADE COMMISSION..... | 388 | - | 388 | - |
| GENERAL SERVICES ADMINISTRATION..... | 325 | - | 215 | 110 |
| LIBRARY OF CONGRESS..... | 1,932 | - | 968 | 964 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 3,799,946 | 637,034 | 772,698 | 2,390,214 |
| NATIONAL SCIENCE FOUNDATION..... | 288,978 | 244,977 | 29,812 | 14,189 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 123,383 | 1,600 | 27,800 | 93,983 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 1,016 | - | 1,016 | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 1,858 | 372 | 557 | 929 |
| SMALL BUSINESS ADMINISTRATION..... | 101 | - | 101 | - |
| SMITHSONIAN INSTITUTION..... | 18,217 | 18,217 | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 8,151 | - | 6,376 | 1,775 |
| UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY..... | 4,245 | - | 3,732 | 513 |
| UNITED STATES INFORMATION AGENCY..... | 234 | - | 157 | 77 |
| VETERANS ADMINISTRATION..... | 58,612 | 5,260 | 52,502 | 850 |

TABLE C-5. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | RESEARCH | | DEVELOPMENT |
|--|------------|-----------|-----------|-------------|
| | | BASIC | APPLIED | |
| TOTAL, ALL AGENCIES..... | 15,387,209 | 2,165,031 | 3,830,092 | 9,392,086 |
| DEPARTMENTS | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 302,757 | 122,780 | 169,830 | 10,147 |
| AGRICULTURAL RESEARCH SERVICE..... | 172,296 | 76,861 | 86,420 | 9,015 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 66,999 | 25,460 | 41,539 | - |
| ECONOMIC RESEARCH SERVICE..... | 15,688 | 4,550 | 11,138 | - |
| FARMER COOPERATIVE SERVICE..... | 945 | 236 | 709 | - |
| FOREST SERVICE..... | 45,867 | 15,595 | 29,355 | 917 |
| NATIONAL AGRICULTURAL LIBRARY..... | 259 | - | 259 | - |
| STATISTICAL REPORTING SERVICE..... | 703 | 78 | 410 | 215 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 157,861 | 49,634 | 78,416 | 29,811 |
| BUREAU OF THE CENSUS..... | 4,259 | 406 | 1,759 | 2,094 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 5,446 | - | 1,844 | 3,602 |
| MARITIME ADMINISTRATION..... | 24,300 | - | 17,493 | 6,807 |
| NATIONAL BUREAU OF STANDARDS..... | 31,656 | 15,018 | 13,884 | 2,754 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 84,994 | 28,048 | 42,497 | 14,449 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,004 | 4,004 | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 2,642 | 2,158 | 484 | - |
| PATENT OFFICE..... | 560 | - | 455 | 105 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 7,420,217 | 243,037 | 1,236,296 | 5,940,884 |
| DEPARTMENT OF THE ARMY..... | 1,691,115 | 46,597 | 209,661 | 1,434,857 |
| DEPARTMENT OF THE NAVY..... | 2,236,894 | 85,040 | 182,960 | 1,968,894 |
| DEPARTMENT OF THE AIR FORCE..... | 3,024,615 | 80,000 | 564,000 | 2,380,615 |
| DEFENSE AGENCIES..... | 414,041 | 31,400 | 276,123 | 106,518 |
| DEPARTMENT-WIDE FUNDS..... | 53,552 | - | 3,552 | 50,000 |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 1,479,937 | 451,822 | 910,400 | 117,715 |
| FOOD AND DRUG ADMINISTRATION..... | 25,922 | - | 25,922 | - |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 227,726 | 66,711 | 122,575 | 38,440 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,038,487 | 372,369 | 658,338 | 7,780 |
| OFFICE OF CHILD DEVELOPMENT..... | 5,500 | - | 2,000 | 3,500 |
| OFFICE OF EDUCATION..... | 133,215 | 12,317 | 56,283 | 64,615 |
| SOCIAL AND REHABILITATION SERVICE..... | 35,580 | - | 32,200 | 3,380 |
| SOCIAL SECURITY ADMINISTRATION..... | 13,507 | 425 | 13,082 | - |
| DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT..... | 49,425 | - | 11,862 | 37,563 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 185,082 | 50,657 | 83,904 | 50,521 |
| BONNEVILLE POWER ADMINISTRATION..... | 2,659 | - | 474 | 2,185 |
| BUREAU OF LAND MANAGEMENT..... | 779 | - | 755 | 24 |
| BUREAU OF MINES..... | 58,049 | 6,457 | 31,599 | 19,993 |
| BUREAU OF OUTDOOR RECREATION..... | 133 | - | 133 | - |
| BUREAU OF RECLAMATION..... | 9,121 | 44 | 8,974 | 103 |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | 22,158 | 9,551 | 10,581 | 2,026 |
| GEOLOGICAL SURVEY..... | 43,196 | 30,381 | 12,815 | - |
| OFFICE OF COAL RESEARCH..... | 12,377 | - | 4,809 | 7,568 |
| OFFICE OF SALINE WATER..... | 23,410 | 1,600 | 3,400 | 18,410 |
| OFFICE OF THE SECRETARY..... | 795 | - | 583 | 212 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 12,405 | 2,624 | 9,781 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 10,055 | - | 6,210 | 3,845 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS..... | 1,560 | - | 1,560 | - |
| BUREAU OF PRISONS..... | 200 | - | - | 200 |
| FEDERAL BUREAU OF INVESTIGATION..... | 795 | - | - | 795 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | 7,500 | - | 4,650 | 2,850 |

CONTINUED ON NEXT PAGE

TABLE C-5. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK,
FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

CONTINUED

| AGENCY AND SUBDIVISION | TOTAL | RESEARCH | | DEVELOPMENT |
|---|-----------|----------|---------|-------------|
| | | BASIC | APPLIED | |
| DEPARTMENT OF LABOR, TOTAL..... | 24,475 | 2,578 | 9,917 | 11,980 |
| BUREAU OF LABOR STATISTICS..... | 3,767 | 1,461 | 1,154 | 1,152 |
| LABOR-MANAGEMENT SERVICES ADMINISTRATION..... | 720 | 720 | - | - |
| MANPOWER ADMINISTRATION..... | 17,438 | 397 | 6,213 | 10,828 |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,550 | - | 2,550 | - |
| POSTAL SERVICE..... | 45,147 | - | 5,568 | 39,579 |
| DEPARTMENT OF STATE, TOTAL..... | 40,463 | - | 25,359 | 15,104 |
| DEPARTMENTAL FUNDS..... | 350 | - | 350 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 40,010 | - | 24,906 | 15,104 |
| PEACE CORPS..... | 103 | - | 103 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 436,749 | 20,607 | 90,288 | 325,854 |
| FEDERAL AVIATION ADMINISTRATION..... | 79,018 | - | 23,018 | 56,000 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 32,316 | 6,463 | 21,005 | 4,848 |
| FEDERAL RAILROAD ADMINISTRATION..... | 19,717 | - | 9,846 | 9,871 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION..... | 16,672 | 1,100 | 11,972 | 3,600 |
| OFFICE OF THE SECRETARY..... | 249,113 | - | 15,594 | 233,519 |
| UNITED STATES COAST GUARD..... | 25,631 | 11,542 | 4,389 | 9,700 |
| URBAN MASS TRANSPORTATION ADMINISTRATION..... | 14,282 | 1,502 | 4,464 | 8,316 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 945 | - | 373 | 572 |
| BUREAU OF ENGRAVING AND PRINTING..... | 945 | - | 373 | 572 |
| OTHER AGENCIES | | | | |
| ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS..... | 477 | - | 477 | - |
| ATOMIC ENERGY COMMISSION..... | 1,306,563 | 278,118 | 145,297 | 883,148 |
| CIVIL AERONAUTICS BOARD..... | 270 | - | 270 | - |
| CIVIL SERVICE COMMISSION..... | 498 | 106 | 221 | 171 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 116,167 | 5,941 | 55,541 | 54,685 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 638 | - | 638 | - |
| FEDERAL HOME LOAN BANK BOARD..... | 388 | - | 388 | - |
| FEDERAL TRADE COMMISSION..... | 467 | - | 467 | - |
| GENERAL SERVICES ADMINISTRATION..... | 251 | - | 83 | 168 |
| LIBRARY OF CONGRESS..... | 2,515 | - | 1,006 | 1,509 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 3,247,746 | 626,068 | 851,515 | 1,770,163 |
| NATIONAL SCIENCE FOUNDATION..... | 345,001 | 285,136 | 42,150 | 17,715 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 115,600 | 2,400 | 36,750 | 76,450 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 955 | - | 995 | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 1,980 | 396 | 594 | 990 |
| SMITHSONIAN INSTITUTION..... | 20,346 | 20,346 | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 9,335 | - | 7,478 | 1,857 |
| UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY..... | 3,064 | - | 2,335 | 729 |
| UNITED STATES INFORMATION AGENCY..... | 186 | - | 160 | 26 |
| VETERANS ADMINISTRATION..... | 61,609 | 5,405 | 55,304 | 900 |

TABLE C-6. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | RESEARCH | | DEVELOPMENT |
|--|------------|-----------|-----------|-------------|
| | | BASIC | APPLIED | |
| TOTAL, ALL AGENCIES..... | 16,661,508 | 2,399,104 | 4,244,480 | 10,017,924 |
| DEPARTMENTS | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 314,014 | 127,585 | 175,885 | 10,544 |
| AGRICULTURAL RESEARCH SERVICE..... | 176,781 | 79,088 | 88,290 | 9,403 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 73,602 | 27,969 | 45,633 | - |
| ECONOMIC RESEARCH SERVICE..... | 15,428 | 4,474 | 10,954 | - |
| FARMER COOPERATIVE SERVICE..... | 943 | 236 | 707 | - |
| FOREST SERVICE..... | 46,294 | 15,740 | 29,628 | 926 |
| NATIONAL AGRICULTURAL LIBRARY..... | 263 | - | 263 | - |
| STATISTICAL REPORTING SERVICE..... | 703 | 78 | 410 | 215 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 181,720 | 57,730 | 86,042 | 37,948 |
| BUREAU OF THE CENSUS..... | 3,535 | 406 | 1,498 | 1,631 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 5,111 | - | 1,591 | 3,520 |
| MARITIME ADMINISTRATION..... | 26,000 | - | 14,445 | 11,555 |
| NATIONAL BUREAU OF STANDARDS..... | 34,131 | 15,341 | 15,139 | 3,651 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 102,860 | 33,944 | 51,430 | 17,486 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,508 | 4,508 | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 5,000 | 3,531 | 1,469 | - |
| PATENT OFFICE..... | 575 | - | 470 | 105 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 8,332,044 | 245,486 | 1,388,076 | 6,698,482 |
| DEPARTMENT OF THE ARMY..... | 2,071,429 | 46,639 | 233,789 | 1,791,001 |
| DEPARTMENT OF THE NAVY..... | 2,515,274 | 88,747 | 203,253 | 2,223,274 |
| DEPARTMENT OF THE AIR FORCE..... | 3,209,010 | 81,000 | 617,000 | 2,511,010 |
| DEFENSE AGENCIES..... | 482,631 | 29,100 | 330,334 | 123,197 |
| DEPARTMENT-WIDE FUNDS..... | 53,700 | - | 3,700 | 50,000 |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 1,635,425 | 487,842 | 1,001,916 | 145,667 |
| FOOD AND DRUG ADMINISTRATION..... | 33,916 | - | 33,916 | - |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 229,491 | 68,810 | 119,681 | 41,000 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,168,461 | 407,337 | 747,085 | 14,039 |
| OFFICE OF CHILD DEVELOPMENT..... | 16,500 | - | 3,500 | 13,000 |
| OFFICE OF EDUCATION..... | 138,376 | 11,215 | 51,998 | 75,163 |
| SOCIAL AND REHABILITATION SERVICE..... | 34,395 | - | 31,930 | 2,465 |
| SOCIAL SECURITY ADMINISTRATION..... | 14,286 | 480 | 13,806 | - |
| DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT..... | 49,000 | - | 12,740 | 36,260 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 204,289 | 53,114 | 91,252 | 59,923 |
| BONNEVILLE POWER ADMINISTRATION..... | 3,093 | - | 495 | 2,598 |
| BUREAU OF LAND MANAGEMENT..... | 817 | - | 793 | 24 |
| BUREAU OF MINES..... | 66,740 | 7,686 | 31,855 | 27,219 |
| BUREAU OF OUTDOOR RECREATION..... | 76 | - | 76 | - |
| BUREAU OF RECLAMATION..... | 9,638 | 30 | 9,493 | 115 |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | 23,212 | 9,712 | 11,446 | 2,054 |
| GEOLOGICAL SURVEY..... | 48,530 | 31,024 | 17,506 | - |
| OFFICE OF COAL RESEARCH..... | 12,300 | - | 4,059 | 8,241 |
| OFFICE OF SALINE WATER..... | 24,750 | 1,700 | 3,775 | 19,275 |
| OFFICE OF THE SECRETARY..... | 1,590 | - | 1,193 | 397 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 13,523 | 2,962 | 10,561 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 23,905 | - | 15,162 | 8,743 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS..... | 2,162 | - | 2,162 | - |
| BUREAU OF PRISONS..... | 293 | - | - | 293 |
| FEDERAL BUREAU OF INVESTIGATION..... | 450 | - | - | 450 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | 21,090 | - | 13,000 | 8,000 |

CONTINUED ON NEXT PAGE

TABLE C-6. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND CHARACTER OF WORK,
FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

CONTINUED

| AGENCY AND SUBDIVISION | TOTAL | RESEARCH | | DEVELOPMENT |
|---|-----------|----------|---------|-------------|
| | | BASIC | APPLIED | |
| DEPARTMENT OF LABOR, TOTAL..... | 24,862 | 2,712 | 9,930 | 12,220 |
| BUREAU OF LABOR STATISTICS..... | 3,769 | 1,463 | 1,154 | 1,152 |
| LABOR-MANAGEMENT SERVICES ADMINISTRATION..... | 812 | 812 | - | - |
| MANPOWER ADMINISTRATION..... | 17,748 | 437 | 6,243 | 11,068 |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,533 | - | 2,533 | - |
| POSTAL SERVICE..... | 76,267 | - | 5,860 | 70,407 |
| DEPARTMENT OF STATE, TOTAL..... | 44,143 | - | 28,204 | 15,939 |
| DEPARTMENTAL FUNDS..... | 650 | - | 650 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 43,493 | - | 27,554 | 15,939 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 483,193 | 22,949 | 161,000 | 299,244 |
| FEDERAL AVIATION ADMINISTRATION..... | 81,547 | - | 60,371 | 21,176 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 37,821 | 7,564 | 24,584 | 5,673 |
| FEDERAL RAILROAD ADMINISTRATION..... | 18,260 | - | 10,500 | 7,760 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION..... | 27,450 | 1,900 | 21,050 | 4,500 |
| OFFICE OF THE SECRETARY..... | 266,000 | - | 31,000 | 235,000 |
| UNITED STATES COAST GUARD..... | 31,763 | 11,983 | 8,585 | 11,195 |
| URBAN MASS TRANSPORTATION ADMINISTRATION..... | 20,352 | 1,502 | 4,910 | 13,940 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 908 | - | 390 | 518 |
| BUREAU OF ENGRAVING AND PRINTING..... | 908 | - | 390 | 518 |
| OTHER AGENCIES | | | | |
| ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS..... | 487 | - | 487 | - |
| ATOMIC ENERGY COMMISSION..... | 1,251,387 | 266,359 | 145,025 | 840,003 |
| CIVIL AERONAUTICS BOARD..... | 331 | - | 331 | - |
| CIVIL SERVICE COMMISSION..... | 533 | 113 | 237 | 183 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 144,386 | 8,428 | 70,302 | 65,656 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 869 | - | 869 | - |
| FEDERAL HOME LOAN BANK BOARD..... | 497 | - | 497 | - |
| FEDERAL TRADE COMMISSION..... | 460 | - | 460 | - |
| GENERAL SERVICES ADMINISTRATION..... | 202 | - | 20 | 182 |
| LIBRARY OF CONGRESS..... | 3,916 | - | 1,175 | 2,741 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 3,188,455 | 688,371 | 873,546 | 1,626,538 |
| NATIONAL SCIENCE FOUNDATION..... | 494,286 | 399,636 | 70,400 | 24,250 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 100,000 | 5,500 | 37,100 | 57,400 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 535 | - | 535 | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 2,160 | 432 | 648 | 1,080 |
| SMALL BUSINESS ADMINISTRATION..... | 205 | - | 205 | - |
| SMITHSONIAN INSTITUTION..... | 27,247 | 27,247 | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 10,167 | - | 8,197 | 1,970 |
| UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY..... | 3,496 | - | 2,420 | 1,076 |
| UNITED STATES INFORMATION AGENCY..... | 200 | - | 150 | 50 |
| VETERANS ADMINISTRATION..... | 61,819 | 5,600 | 55,419 | 900 |

TABLE C-7. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|--|----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|--------------------------------|---|-------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTI-TUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 15,329.8 | 3,875.5 | 7,950.6 | 430.7 | 1,472.9 | 749.7 | 462.4 | 249.1 | 98.7 | 40.2 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 281.2 | 208.4 | 1.3 | - | 64.8 | - | 1.2 | - | * | 5.5 |
| AGRICULTURAL RESEARCH SERVICE..... | 160.6 | 148.7 | 1.1 | - | 5.1 | - | .9 | - | - | 4.9 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 61.1 | 2.1 | - | - | 58.7 | - | .3 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 14.9 | 14.7 | * | - | .2 | - | - | - | * | - |
| FARMER COOPERATIVE SERVICE..... | .9 | .9 | - | - | * | - | - | - | - | - |
| FOREST SERVICE..... | 42.8 | 41.4 | * | - | .7 | - | - | - | * | .6 |
| NATIONAL AGRICULTURAL LIBRARY..... | .2 | .1 | .1 | - | * | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | .7 | .5 | .1 | - | .1 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 121.6 | 88.2 | 17.7 | - | 4.5 | - | 1.2 | * | 8.5 | 1.6 |
| BUREAU OF THE CENSUS..... | 3.0 | 3.0 | - | - | .1 | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 8.8 | 1.4 | 1.7 | - | 1.5 | - | .3 | - | 3.8 | - |
| MARITIME ADMINISTRATION..... | 12.6 | .5 | 11.8 | - | .2 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 29.6 | 28.5 | - | - | .4 | - | - | - | - | .7 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 63.8 | 50.9 | 4.2 | - | 2.3 | - | .8 | - | 4.7 | .9 |
| OFFICE OF BUSINESS ECONOMICS..... | 3.5 | 3.5 | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | .4 | .4 | - | - | - | - | - | * | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 7,360.4 | 1,995.6 | 4,737.3 | 15.1 | 213.5 | 139.9 | 93.5 | 154.8 | .5 | 10.2 |
| DEPARTMENT OF THE ARMY..... | 1,659.8 | 629.5 | 933.4 | - | 31.3 | 26.6 | 20.7 | 14.9 | .5 | 3.0 |
| DEPARTMENT OF THE NAVY..... | 2,257.9 | 708.5 | 1,393.6 | - | 73.9 | 65.5 | 12.7 | * | - | 3.7 |
| DEPARTMENT OF THE AIR FORCE..... | 2,990.0 | 525.9 | 2,205.4 | - | 70.1 | 26.4 | 47.3 | 113.6 | - | 1.3 |
| DEFENSE AGENCIES..... | 448.6 | 131.0 | 203.6 | 15.0 | 37.9 | 21.4 | 11.8 | 25.7 | - | 2.2 |
| DEPARTMENT-WIDE FUNDS..... | 4.1 | .6 | 1.4 | .1 | .4 | * | 1.1 | .5 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 1,221.0 | 246.6 | 43.7 | - | 646.6 | 8.0 | 184.4 | 27.7 | 48.4 | 15.6 |
| FOOD AND DRUG ADMINISTRATION..... | 21.8 | 13.4 | .2 | - | 4.6 | - | 1.0 | - | 2.2 | .5 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 168.4 | 49.5 | 5.9 | - | 82.9 | - | 30.3 | - | 16.8 | 2.9 |
| NATIONAL INSTITUTES OF HEALTH..... | 873.3 | 165.6 | 36.0 | - | 517.8 | .1 | 121.4 | .7 | 22.0 | 9.8 |
| OFFICE OF CHILD DEVELOPMENT..... | 2.0 | .1 | - | - | 1.7 | - | .3 | - | - | - |
| OFFICE OF EDUCATION..... | 88.2 | 4.9 | 1.4 | - | 22.9 | 7.9 | 21.6 | 27.0 | 2.3 | * |
| SOCIAL AND REHABILITATION SERVICE..... | 34.9 | 1.0 | - | - | 16.5 | - | 9.8 | - | 5.2 | 2.4 |
| SOCIAL SECURITY ADMINISTRATION..... | 12.4 | 12.0 | .1 | - | .2 | - | * | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP. | 29.9 | 3.7 | 20.7 | .3 | .5 | - | 3.1 | .2 | 1.4 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 157.9 | 100.4 | 26.3 | 1.4 | 18.5 | - | 2.5 | .1 | 8.6 | * |
| BONNEVILLE POWER ADMINISTRATION..... | 1.8 | .8 | .8 | - | .1 | - | - | - | - | * |
| BUREAU OF LAND MANAGEMENT..... | .7 | .4 | - | - | .3 | - | - | - | * | - |
| BUREAU OF MINES..... | 46.5 | 40.7 | 3.9 | - | 1.6 | - | .2 | .1 | .1 | - |
| BUREAU OF OUTDOOR RECREATION..... | .1 | .1 | - | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 7.3 | 2.8 | .9 | - | 3.3 | - | - | - | .3 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.... | 20.0 | 11.3 | - | - | .5 | - | .2 | - | 8.1 | - |
| GEOLOGICAL SURVEY..... | 41.0 | 40.0 | .4 | - | .6 | - | 1.5 | - | - | - |
| OFFICE OF COAL RESEARCH..... | 5.7 | .4 | 3.2 | - | .6 | - | .5 | - | - | - |
| OFFICE OF SALINE WATER..... | 24.1 | 3.3 | 16.6 | 1.4 | 2.4 | - | .5 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 10.8 | .7 | .6 | - | 9.2 | - | .2 | - | .1 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 8.6 | 1.0 | 1.6 | - | 1.9 | - | .8 | - | 3.2 | - |

CONTINUED ON NEXT PAGE

TABLE C-7. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | | FOREIGN |
|---|---------|--------------------|-------------------------------|-----------------------------------|-------------------------|--|-------------------------------|--|-------|---------|
| | | | EXTRAMURAL | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVERSITIES & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | .8 | * | - | - | .5 | - | - | .3 | - | - |
| BUREAU OF PRISONS | .2 | .2 | * | - | - | - | - | * | - | - |
| FEDERAL BUREAU OF INVESTIGATION | .2 | .1 | .1 | - | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN. | 7.4 | .7 | 1.5 | - | 1.5 | - | - | .5 | - | 3.1 |
| DEPARTMENT OF LABOR, TOTAL | 20.6 | 9.5 | 1.4 | - | 3.6 | - | - | 4.1 | - | 2.0 |
| BUREAU OF LABOR STATISTICS | 3.8 | 3.8 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN. | .3 | .3 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION | 14.3 | 3.1 | 1.4 | - | 3.6 | - | - | 4.1 | - | 2.0 |
| WORKPLACE STANDARDS ADMINISTRATION | 2.2 | 2.2 | - | - | - | - | - | - | - | - |
| POSTAL SERVICE | 38.7 | 7.5 | 30.0 | - | * | - | - | * | .8 | .4 |
| DEPARTMENT OF STATE, TOTAL | 27.6 | 5.5 | .2 | - | 8.2 | - | - | 11.2 | - | 2.4 |
| DEPARTMENTAL FUNDS | .1 | .1 | - | - | * | - | - | * | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT | 27.3 | 5.4 | .1 | - | 8.2 | - | - | 11.1 | - | 2.4 |
| PEACE CORPS | .1 | .1 | .1 | - | * | - | - | * | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL | 317.3 | 64.2 | 206.4 | - | 10.9 | - | - | 10.3 | 3.2 | 22.4 |
| FEDERAL AVIATION ADMINISTRATION | 56.1 | 35.1 | 18.0 | - | .7 | - | - | 2.3 | 2.2 | - |
| FEDERAL HIGHWAY ADMINISTRATION | 12.8 | 5.8 | 3.9 | - | .7 | - | - | .1 | .8 | 20.2 |
| FEDERAL RAILROAD ADMINISTRATION | 1.5 | 1.1 | 9.0 | - | .5 | - | - | 4.0 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. | 19.5 | 1.4 | 7.2 | - | 5.0 | - | - | .4 | .1 | 1.9 |
| OFFICE OF THE SECRETARY | 169.5 | 6.1 | 161.9 | - | .9 | - | - | .4 | .1 | .1 |
| UNITED STATES COAST GUARD | 18.4 | 14.7 | 3.4 | - | .1 | - | - | .2 | - | - |
| URBAN MASS TRANSPORTATION ADMIN. | 9.5 | * | 3.0 | - | 3.1 | - | - | 3.3 | - | .1 |
| DEPARTMENT OF THE TREASURY, TOTAL | .6 | .6 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING | .6 | .6 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS | .6 | .6 | - | 409.6 | 100.3 | - | 448.0 | - | - | - |
| ATOMIC ENERGY COMMISSION | 1,346.0 | 17.5 | 300.0 | - | - | - | - | 9.7 | 59.9 | .2 |
| CIVIL AERONAUTICS BOARD | .3 | .3 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION | .4 | .4 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY | 88.5 | 26.2 | 32.1 | - | 18.2 | - | 1.3 | 7.3 | .3 | 2.5 |
| FEDERAL COMMUNICATIONS COMMISSION | 1.0 | .6 | .4 | - | .1 | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD | .4 | .3 | - | - | - | - | - | - | - | - |
| FEDERAL TRADE COMMISSION | .4 | .4 | - | - | - | - | - | - | - | - |
| GENERAL SERVICES ADMINISTRATION | .3 | .2 | .1 | - | - | - | - | * | - | - |
| LIBRARY OF CONGRESS | 1.9 | 1.9 | * | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN. | 3,799.9 | 988.0 | 2,516.2 | 4.3 | 131.2 | - | 126.8 | 31.0 | 1.0 | 1.4 |
| NATIONAL SCIENCE FOUNDATION | 289.0 | 13.9 | 2.8 | - | 228.0 | - | 25.7 | 15.9 | .8 | .1 |
| OFFICE OF ECONOMIC OPPORTUNITY | 123.4 | 6.7 | 10.4 | - | 20.0 | - | - | 85.9 | .3 | - |
| OFFICE OF EMERGENCY PREPAREDNESS | 1.0 | .6 | .3 | - | - | - | - | .1 | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY | 1.9 | 1.9 | - | - | - | - | - | - | - | - |
| SMALL BUSINESS ADMINISTRATION | .1 | .1 | - | - | .1 | - | - | - | - | .5 |
| SMITHSONIAN INSTITUTION | 18.2 | 16.6 | - | - | 1.1 | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY | 8.2 | 8.0 | - | - | .1 | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY | 4.2 | 2.7 | 1.2 | - | .1 | - | - | .2 | * | - |
| UNITED STATES INFORMATION AGENCY | .2 | .1 | .1 | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION | 58.6 | 57.3 | .3 | - | .5 | - | - | .1 | - | .5 |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-8. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)
(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|--|----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|-------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 15,387.2 | 3,928.7 | 7,718.1 | 478.6 | 1,616.6 | 762.1 | 470.9 | 208.3 | 136.2 | 67.7 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 302.8 | 226.5 | .7 | - | 68.0 | - | .9 | - | * | 6.6 |
| AGRICULTURAL RESEARCH SERVICE..... | 172.3 | 162.7 | .6 | - | 2.6 | - | .5 | - | - | 6.0 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 67.0 | 2.3 | - | - | 64.4 | - | .3 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 15.7 | 15.5 | - | - | .2 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | .9 | .9 | - | - | .1 | - | - | - | - | - |
| FOREST SERVICE..... | 45.9 | 44.5 | * | - | .7 | - | - | - | * | .6 |
| NATIONAL AGRICULTURAL LIBRARY..... | .3 | .1 | * | - | * | - | .1 | - | - | - |
| STATISTICAL REPORTING SERVICE..... | .7 | .5 | .1 | - | .1 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 157.9 | 110.7 | 31.9 | - | 6.3 | - | 1.4 | - | 5.9 | 1.6 |
| BUREAU OF THE CENSUS..... | 4.3 | 4.2 | - | - | * | - | * | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 5.4 | 1.6 | 1.4 | - | 1.6 | - | .3 | - | .5 | - |
| MARITIME ADMINISTRATION..... | 24.3 | .9 | 22.3 | - | 1.1 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 31.7 | 30.6 | * | - | .4 | - | - | - | - | .6 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 85.0 | 66.3 | 8.2 | - | 3.1 | - | 1.1 | - | 5.4 | .9 |
| OFFICE OF BUSINESS ECONOMICS..... | 4.0 | 4.0 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 2.6 | 2.6 | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | .6 | .6 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 7,420.2 | 1,983.3 | 4,826.6 | 8.8 | 195.1 | 145.9 | 88.0 | 155.0 | 9.5 | 8.1 |
| DEPARTMENT OF THE ARMY..... | 1,691.1 | 637.1 | 946.9 | - | 30.8 | 28.5 | 20.4 | 16.1 | 9.5 | 1.8 |
| DEPARTMENT OF THE NAVY..... | 2,236.9 | 728.8 | 1,349.7 | - | 69.8 | 71.4 | 12.7 | - | - | 4.4 |
| DEPARTMENT OF THE AIR FORCE..... | 3,024.6 | 486.6 | 2,300.0 | - | 57.1 | 25.7 | 42.8 | 111.2 | - | 1.1 |
| DEFENSE AGENCIES..... | 414.0 | 127.8 | 186.2 | 8.6 | 32.0 | 20.2 | 11.2 | 27.4 | - | .7 |
| DEPARTMENT-WIDE FUNDS..... | 53.6 | 2.9 | 43.8 | .3 | 5.5 | * | .9 | .3 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,479.9 | 293.6 | 59.4 | - | 768.6 | 6.8 | 213.1 | 27.5 | 73.3 | 37.7 |
| FOOD AND DRUG ADMINISTRATION..... | 25.9 | 14.8 | .1 | - | 7.8 | - | 1.2 | - | - | 2.0 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 227.7 | 55.4 | 12.9 | - | 85.7 | - | 39.2 | - | 18.6 | 15.9 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,038.5 | 204.2 | 43.3 | - | 605.9 | .1 | 144.0 | .8 | 24.7 | 15.5 |
| OFFICE OF CHILD DEVELOPMENT..... | 5.5 | .3 | - | - | 3.5 | - | 1.7 | - | - | - |
| OFFICE OF EDUCATION..... | 133.2 | 4.8 | 2.8 | - | 49.7 | 6.7 | 18.0 | 26.7 | 24.5 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 35.6 | 1.1 | - | - | 15.7 | - | 9.1 | - | 5.5 | 4.2 |
| SOCIAL SECURITY ADMINISTRATION..... | 13.5 | 13.0 | .3 | - | .2 | - | - | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP. | 49.4 | 6.1 | 36.1 | .3 | 1.2 | - | 4.0 | - | 1.7 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 185.1 | 107.7 | 36.9 | 1.4 | 23.1 | - | 5.8 | - | 10.0 | .2 |
| BONNEVILLE POWER ADMINISTRATION..... | 2.7 | 1.4 | .9 | - | .2 | - | - | - | - | .2 |
| BUREAU OF LAND MANAGEMENT..... | .8 | .4 | - | - | .3 | - | - | - | * | - |
| BUREAU OF MINES..... | 58.0 | 43.3 | 11.0 | - | 3.0 | - | .6 | - | .1 | - |
| BUREAU OF OUTDOOR RECREATION..... | .1 | .1 | - | - | .1 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 9.1 | 3.5 | 1.4 | - | 3.6 | - | - | - | .5 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 22.2 | 12.8 | - | - | .3 | - | .2 | - | 8.9 | - |
| GEOLOGICAL SURVEY..... | 43.2 | 41.6 | .6 | - | .9 | - | 4.1 | - | .1 | - |
| OFFICE OF COAL RESEARCH..... | 12.4 | .2 | 5.6 | - | 2.5 | - | .4 | - | - | - |
| OFFICE OF SALINE WATER..... | 23.4 | 3.5 | 15.8 | 1.4 | 2.3 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | .8 | * | .6 | - | .2 | - | .6 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 12.4 | .8 | 1.0 | - | 9.8 | - | - | - | .3 | - |

CONTINUED ON NEXT PAGE

TABLE C-8. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | | FOREIGN |
|--|---------|--------------------|-------------------------------|---|---------------------------------|---|--|--|-------|---------|
| | | | EXTRAMURAL | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN. BY NON- PROFIT INSTI- TUTIONS | OTHER | |
| DEPARTMENT OF JUSTICE, TOTAL..... | 10.1 | 1.0 | 2.8 | - | 1.9 | - | .9 | .2 | 3.3 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS..... | 1.6 | * | .4 | - | .4 | - | .5 | .2 | - | - |
| BUREAU OF PRISONS..... | .2 | .1 | * | - | - | - | * | - | * | - |
| FEDERAL BUREAU OF INVESTIGATION..... | .8 | .1 | .7 | - | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 7.5 | .8 | 1.7 | - | 1.5 | - | .4 | - | 3.2 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 24.5 | 10.9 | 1.7 | - | 4.4 | - | 5.1 | - | 2.4 | - |
| BUREAU OF LABOR STATISTICS..... | 3.8 | 3.8 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | .7 | .7 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 17.4 | 3.8 | 1.7 | - | 4.4 | - | 5.1 | - | 2.4 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2.6 | 2.6 | - | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 45.1 | 7.4 | 37.1 | - | .1 | - | .3 | .3 | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 40.5 | 5.8 | .3 | - | 17.4 | - | 11.4 | - | .2 | 5.3 |
| DEPARTMENTAL FUNDS..... | .4 | .1 | - | - | * | - | * | - | .2 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 40.0 | 5.7 | .2 | - | 17.4 | - | 11.4 | - | - | 5.3 |
| PEACE CORPS..... | .1 | * | .1 | - | - | - | * | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 436.7 | 83.3 | 310.0 | - | 10.5 | - | 7.3 | 4.3 | 21.4 | * |
| FEDERAL AVIATION ADMINISTRATION..... | 79.0 | 44.9 | 29.5 | - | .9 | - | - | 3.7 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 32.3 | 4.9 | 3.7 | - | .6 | - | 2.3 | - | 20.8 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 19.7 | 2.5 | 15.4 | - | 1.1 | - | .1 | .6 | - | * |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 16.7 | 3.1 | 8.0 | - | 3.0 | - | 2.4 | - | .2 | - |
| OFFICE OF THE SECRETARY..... | 249.1 | 6.0 | 242.7 | - | .4 | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 25.6 | 15.7 | 8.9 | - | .1 | - | .9 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 14.3 | 6.2 | 1.9 | - | 4.2 | - | 1.5 | - | .4 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | .9 | .9 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | .9 | .9 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | .5 | .5 | - | 464.2 | - | 94.9 | 431.9 | 7.9 | 19.2 | .2 |
| ATOMIC ENERGY COMMISSION..... | 1,306.6 | 15.7 | 271.6 | - | - | - | - | - | - | .9 |
| CIVIL AERONAUTICS BOARD..... | .3 | .3 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | .5 | .5 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 116.2 | 37.8 | 43.9 | - | 17.9 | 1.5 | 8.2 | .4 | .4 | 2.5 |
| FEDERAL COMMUNICATIONS COMMISSION..... | .6 | .6 | - | - | - | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | .4 | .4 | - | - | - | - | - | - | - | - |
| FEDERAL RESERVE BOARD..... | .5 | .5 | - | - | - | - | - | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | .3 | .1 | - | - | * | - | - | * | .2 | - |
| LIBRARY OF CONGRESS..... | 2.5 | 2.5 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 3,247.7 | 908.0 | 2,042.0 | 2.9 | 125.0 | 144.7 | 23.2 | .5 | - | 1.5 |
| NATIONAL SCIENCE FOUNDATION..... | 345.0 | 23.5 | 3.5 | 1.0 | 257.8 | 31.4 | 20.7 | .7 | 4.5 | 1.9 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 115.6 | 8.3 | 12.3 | - | 22.4 | - | 72.2 | .3 | - | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 1.0 | .7 | .3 | - | - | - | .1 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 2.0 | 2.0 | - | - | - | - | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | 20.3 | 18.8 | - | - | 1.1 | - | - | - | .4 | - |
| TENNESSEE VALLEY AUTHORITY..... | 9.3 | 9.2 | - | - | .1 | - | - | - | .1 | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 3.1 | 2.0 | .5 | - | .1 | - | .4 | - | - | - |
| UNITED STATES INFORMATION AGENCY..... | .2 | .1 | .1 | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 61.6 | 60.0 | .4 | - | .8 | - | .1 | - | .5 | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-9. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|---|----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|--------------------------------|---|-------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTI-TUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTI-TUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 16,661.5 | 4,139.1 | 8,504.1 | 497.9 | 1,826.0 | 778.0 | 483.9 | 210.9 | 145.4 | 76.1 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 314.0 | 227.4 | .6 | - | 73.9 | - | .9 | - | * | 11.2 |
| AGRICULTURAL RESEARCH SERVICE..... | 176.8 | 163.7 | .5 | - | 2.1 | - | .4 | - | - | 10.0 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 73.6 | 2.4 | - | - | 70.8 | - | .3 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 15.4 | 15.2 | - | - | .2 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | .9 | .9 | - | - | * | - | - | - | - | - |
| FOREST SERVICE..... | 46.3 | 44.4 | * | - | .7 | - | - | - | * | 1.2 |
| NATIONAL AGRICULTURAL LIBRARY..... | .3 | .1 | - | - | - | - | .2 | - | - | - |
| STATISTICAL REPORTING SERVICE..... | .7 | .5 | .1 | - | .1 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 181.7 | 130.6 | 35.0 | - | 6.9 | - | 1.7 | - | 6.2 | 1.2 |
| BUREAU OF THE CENSUS..... | 3.5 | 3.5 | - | - | .1 | - | * | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 5.1 | 1.6 | 1.2 | - | 1.6 | - | .3 | - | .5 | - |
| MARITIME ADMINISTRATION..... | 26.0 | 1.0 | 23.9 | - | 1.1 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 34.1 | 33.3 | .1 | - | .5 | - | - | - | - | .4 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF BUSINESS ECONOMICS..... | 102.9 | 81.2 | 9.9 | - | 3.7 | - | 1.4 | - | 5.7 | .9 |
| OFFICE OF TELECOMMUNICATIONS..... | 4.5 | 4.5 | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | 5.0 | 5.0 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 8,332.0 | 2,139.8 | 5,558.5 | 9.4 | 213.4 | 155.3 | 79.4 | 163.2 | 4.2 | 8.7 |
| DEPARTMENT OF THE ARMY..... | 2,071.4 | 741.2 | 1,227.9 | - | 32.2 | 26.4 | 18.2 | 20.3 | 4.2 | 1.1 |
| DEPARTMENT OF THE NAVY..... | 2,515.3 | 771.1 | 1,567.0 | - | 71.2 | 85.4 | 13.2 | 2.0 | - | 5.5 |
| DEPARTMENT OF THE AIR FORCE..... | 3,209.0 | 477.7 | 2,502.8 | - | 55.0 | 24.3 | 36.5 | 111.7 | - | 1.2 |
| DEFENSE AGENCIES..... | 482.6 | 146.8 | 217.1 | 9.2 | 49.6 | 19.3 | 10.8 | 28.9 | - | .9 |
| DEPARTMENT-WIDE FUNDS..... | 53.7 | 3.0 | 43.8 | .2 | 5.4 | * | .9 | .4 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,635.4 | 311.0 | 101.7 | - | 833.5 | 7.9 | 240.1 | 27.4 | 73.9 | 39.8 |
| FOOD AND DRUG ADMINISTRATION..... | 33.9 | 20.2 | .1 | - | 7.0 | - | 1.4 | - | - | 5.1 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. NATIONAL INSTITUTES OF HEALTH..... | 229.5 | 56.7 | 14.6 | - | 86.2 | - | 43.0 | - | 19.2 | 9.8 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,168.5 | 214.3 | 84.5 | - | 670.4 | .3 | 158.3 | .8 | 25.8 | 14.1 |
| OFFICE OF EDUCATION..... | 16.5 | .7 | - | - | 8.5 | - | 7.3 | - | - | - |
| OFFICE OF REHABILITATION SERVICE..... | 138.4 | 5.3 | 2.4 | - | 47.6 | 7.6 | 23.4 | 26.6 | 25.4 | - |
| SOCIAL AND SECURITY ADMINISTRATION..... | 34.4 | 1.0 | - | - | 13.2 | - | 6.7 | - | 3.5 | 10.0 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP. DEPARTMENT OF THE INTERIOR, TOTAL..... | 49.0 | 5.5 | 37.3 | .3 | 1.9 | - | 3.1 | - | .8 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 204.3 | 114.6 | 46.4 | 1.4 | 27.3 | - | 3.6 | - | 10.5 | .5 |
| BUREAU OF LAND MANAGEMENT..... | 3.1 | 1.4 | 1.5 | - | .2 | - | - | - | - | - |
| BUREAU OF MINES..... | .8 | .5 | - | - | .3 | - | - | - | * | - |
| BUREAU OF OUTDOOR RECREATION..... | 66.8 | 47.1 | 14.0 | - | 5.0 | - | .6 | - | .1 | - |
| BUREAU OF RECLAMATION..... | .1 | .1 | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... GEOLOGICAL SURVEY..... | 9.6 | 3.9 | 1.7 | - | 3.5 | - | - | - | .5 | - |
| OFFICE OF COAL RESEARCH..... | 23.2 | 13.3 | - | - | .4 | - | .2 | - | 9.4 | - |
| OFFICE OF SALINE WATER..... | 48.5 | 43.7 | 2.0 | - | 2.6 | - | 1.9 | - | .2 | - |
| OFFICE OF THE SECRETARY..... | 12.3 | .2 | 8.3 | - | 1.9 | - | .4 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 24.8 | 3.5 | 17.1 | 1.4 | 2.4 | - | 1.9 | - | - | - |
| | 1.6 | .1 | .3 | - | .7 | - | .5 | - | - | .5 |
| | 13.5 | .9 | 1.5 | - | 10.3 | - | - | - | .3 | - |

CONTINUED ON NEXT PAGE

TABLE C-9. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(MILLIONS OF DOLLARS)

CONTINUED

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | FOREIGN | |
|--|---------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|---------|-------|
| | | | EXTRAMURAL | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | | OTHER |
| DEPARTMENT OF JUSTICE, TOTAL..... | 23.9 | 2.4 | 6.4 | - | 5.1 | - | 1.2 | .1 | 8.7 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS..... | | | | | | | | | | |
| BUREAU OF PRISONS..... | 2.2 | .1 | .5 | - | .6 | - | .9 | .1 | * | - |
| FEDERAL BUREAU OF INVESTIGATION..... | .3 | .2 | * | - | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | .5 | .1 | .3 | - | - | - | - | - | - | - |
| | 21.0 | 2.0 | 5.5 | - | 4.5 | - | .3 | - | 8.7 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 24.9 | 11.0 | 1.8 | - | 4.4 | - | 5.1 | - | 2.5 | - |
| BUREAU OF LABOR STATISTICS..... | 3.8 | 3.8 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | .8 | .8 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 17.7 | 3.9 | 1.8 | - | 4.4 | - | 5.1 | - | 2.5 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2.5 | 2.5 | - | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 76.3 | 14.6 | 60.5 | - | .1 | - | .3 | .3 | - | .5 |
| DEPARTMENT OF STATE, TOTAL..... | 44.1 | 5.8 | .3 | - | 21.2 | - | 11.6 | - | .5 | 4.8 |
| DEPARTMENTAL FUNDS..... | .7 | .1 | - | - | * | - | * | - | .5 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 43.5 | 5.7 | .3 | - | 21.2 | - | 11.5 | - | - | 4.8 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 483.2 | 87.9 | 343.8 | 1.0 | 11.1 | - | 14.1 | .7 | 24.6 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 81.5 | 38.5 | 42.7 | - | .3 | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 37.8 | 5.8 | 4.4 | - | .6 | - | 2.8 | - | 24.3 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 18.3 | 2.8 | 13.8 | 1.0 | - | - | - | .7 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 27.5 | 3.6 | 13.0 | - | 6.1 | - | 4.7 | - | - | - |
| OFFICE OF THE SECRETARY..... | 266.0 | 11.8 | 252.6 | - | 1.0 | - | .5 | - | .1 | - |
| UNITED STATES COAST GUARD..... | 31.8 | 18.8 | 11.1 | - | .2 | - | 1.7 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 20.4 | 6.6 | 6.1 | - | 3.0 | - | 4.4 | - | .2 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | .9 | .9 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | .9 | .9 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | .5 | .5 | 224.4 | 479.1 | 85.9 | 424.5 | 6.1 | 15.8 | .1 | 1.2 |
| ATOMIC ENERGY COMMISSION..... | 1,251.4 | 14.3 | - | - | - | - | - | - | - | - |
| CIVIL AERONAUTICS BOARD..... | .3 | .3 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | .5 | .5 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 144.4 | 43.8 | 61.8 | - | 21.4 | 1.6 | 8.4 | .2 | 2.5 | 4.6 |
| FEDERAL COMMUNICATIONS COMMISSION..... | .9 | .7 | .2 | - | * | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | .5 | .5 | - | - | - | - | - | - | - | - |
| FEDERAL TRADE COMMISSION..... | .5 | .5 | - | - | - | - | - | - | .2 | - |
| GENERAL SERVICES ADMINISTRATION..... | .2 | .2 | - | - | - | - | - | - | - | - |
| LIBRARY OF CONGRESS..... | 3.9 | 3.9 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 3,188.5 | 887.2 | 2,008.0 | 3.8 | 110.0 | 153.8 | 23.4 | .8 | - | 1.5 |
| NATIONAL SCIENCE FOUNDATION..... | 494.3 | 27.1 | 4.0 | 3.0 | 383.7 | 35.0 | 27.8 | 2.2 | 9.5 | 2.1 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 100.0 | 9.1 | 12.3 | - | 22.4 | - | 56.2 | - | - | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | .5 | .4 | .1 | - | - | - | .1 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 2.2 | 2.2 | - | - | - | - | - | - | .1 | - |
| SMALL BUSINESS ADMINISTRATION..... | .2 | * | - | - | .1 | - | - | - | .7 | - |
| SMITHSONIAN INSTITUTION..... | 27.2 | 24.0 | - | - | 2.6 | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 10.2 | 10.1 | - | - | .1 | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 3.5 | 2.2 | .5 | - | .1 | - | .6 | - | - | - |
| UNITED STATES INFORMATION AGENCY..... | .2 | .1 | .1 | - | * | - | .1 | - | .5 | - |
| VETERANS ADMINISTRATION..... | 61.9 | 60.3 | .4 | - | .8 | - | - | - | - | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | | FOREIGN |
|---|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|--------------------------------|---|--------|---------|
| | | | EXTRAMURAL | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDGS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDGS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTI-TUTIONS | FFRDGS ADMIN. BY NON-PROFIT INSTI-TUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 5,601,906 | 2,032,793 | 1,294,117 | 72,893 | 1,351,567 | 417,190 | 268,321 | 45,055 | 88,201 | 31,769 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 271,925 | 200,092 | 578 | - | 64,677 | - | 1,072 | - | 12 | 5,494 |
| AGRICULTURAL RESEARCH SERVICE..... | 152,468 | 141,475 | 382 | - | 4,972 | - | 772 | - | - | 4,867 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 61,052 | 2,080 | - | - | 58,672 | - | 300 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 14,904 | 14,683 | 8 | - | 208 | - | - | - | 5 | - |
| FARMER COOPERATIVE SERVICE..... | 884 | 865 | - | - | 19 | - | - | - | - | - |
| FOREST SERVICE..... | 41,933 | 40,556 | 6 | - | 737 | - | - | - | 7 | 627 |
| NATIONAL AGRICULTURAL LIBRARY..... | 208 | 107 | 93 | - | 8 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 476 | 326 | 89 | - | 61 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 94,114 | 76,177 | 6,355 | - | 3,175 | - | 879 | 3 | 6,243 | 1,282 |
| BUREAU OF THE CENSUS..... | 1,665 | 1,600 | - | - | 65 | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 3,809 | 524 | 911 | - | 344 | - | 157 | - | 1,873 | - |
| MARITIME ADMINISTRATION..... | 4,878 | 515 | 4,169 | - | 194 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 27,055 | 26,276 | - | - | 373 | - | - | - | - | 406 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF BUSINESS ECONOMICS..... | 52,915 | 43,473 | 1,275 | - | 2,199 | - | 722 | - | 4,370 | 876 |
| PATENT OFFICE..... | 3,505 | 3,505 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 287 | 284 | - | - | - | - | - | 3 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,556,783 | 582,221 | 684,204 | 3,853 | 180,456 | 38,812 | 34,187 | 27,803 | 469 | 4,778 |
| DEPARTMENT OF THE ARMY..... | 291,536 | 212,823 | 41,569 | - | 24,534 | 2,951 | 4,120 | 3,795 | 469 | 1,275 |
| DEPARTMENT OF THE NAVY..... | 272,922 | 156,955 | 41,326 | - | 53,491 | 14,434 | 6,409 | 44 | - | 263 |
| DEPARTMENT OF THE AIR FORCE..... | 665,000 | 131,783 | 452,464 | - | 65,956 | 225 | 13,503 | - | - | 1,069 |
| DEFENSE AGENCIES..... | 323,234 | 80,091 | 147,442 | 3,734 | 36,095 | 21,182 | 9,091 | 23,428 | - | 2,171 |
| DEPARTMENT-WIDE FUNDS..... | 4,091 | 569 | 1,403 | 119 | 380 | 20 | 1,064 | 536 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,129,271 | 235,708 | 38,852 | - | 621,934 | 4,933 | 163,272 | 2,570 | 46,886 | 15,116 |
| FOOD AND DRUG ADMINISTRATION..... | 21,805 | 13,350 | 175 | - | 4,633 | - | 1,007 | - | 2,164 | 476 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. NATIONAL INSTITUTES OF HEALTH..... | 160,358 | 43,117 | 3,739 | - | 70,825 | - | 22,986 | - | 16,770 | 2,921 |
| OFFICE OF CHILD DEVELOPMENT..... | 868,788 | 164,895 | 34,032 | - | 516,241 | - | 121,207 | 640 | 21,958 | 9,765 |
| OFFICE OF EDUCATION..... | 1,000 | 50 | - | - | 950 | - | - | - | - | - |
| OFFICE OF REHABILITATION SERVICE..... | 33,065 | 1,251 | 720 | - | 13,461 | 4,933 | 9,343 | 1,930 | 1,415 | 13 |
| SOCIAL AND REHABILITATION SERVICE..... | 31,885 | 998 | - | - | 15,673 | - | 8,694 | - | 4,579 | 1,941 |
| SOCIAL SECURITY ADMINISTRATION..... | 12,369 | 12,047 | 136 | - | 151 | - | 35 | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 7,097 | 50 | 5,628 | - | - | - | 1,064 | - | 355 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 121,692 | 85,720 | 7,457 | 375 | 17,938 | - | 1,472 | 97 | 8,633 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 524 | 134 | 305 | - | 85 | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 710 | 350 | - | - | 333 | - | - | - | 27 | - |
| BUREAU OF MINES..... | 33,894 | 31,940 | - | - | 1,563 | - | 172 | 97 | 122 | - |
| BUREAU OF OUTDOOR RECREATION..... | 92 | 92 | - | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 7,202 | 2,727 | 944 | - | 3,273 | - | - | - | 258 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 18,041 | 9,292 | - | - | 473 | - | 198 | - | 8,078 | - |
| GEOLOGICAL SURVEY..... | 40,963 | 40,001 | 368 | - | 594 | - | - | - | - | - |
| OFFICE OF COAL RESEARCH..... | 2,341 | 300 | 1,291 | - | 300 | - | 450 | - | - | - |
| OFFICE OF SALINE WATER..... | 7,175 | 234 | 3,946 | 375 | 2,164 | - | 456 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 10,750 | 650 | 603 | - | 9,153 | - | 196 | - | 148 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 5,334 | 301 | 825 | - | 1,842 | - | 331 | - | 2,035 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS LAW ENFORCEMENT ASSISTANCE ADMIN..... | 839 | 25 | - | - | 483 | - | 331 | - | - | - |
| DEPARTMENT OF LABOR, TOTAL..... | 4,495 | 276 | 825 | - | 1,359 | - | - | - | 2,035 | - |
| BUREAU OF LABOR STATISTICS..... | 11,286 | 6,439 | 621 | - | 1,554 | - | 1,803 | - | 869 | - |
| BUREAU OF LABOR STATISTICS..... | 2,566 | 2,566 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 290 | 290 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,214 | 1,367 | 621 | - | 1,554 | - | 1,803 | - | 869 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,216 | 2,216 | - | - | - | - | - | - | - | - |

TABLE C-10. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

CONTINUED

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA- MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|--|-----------|------------------------|-------------------------------|---------------------------------------|---------------------------------|---|--|--|--------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN. BY NON- PROFIT INSTI- TUTIONS | OTHER | |
| POSTAL SERVICE..... | 4,577 | 1,634 | 2,117 | - | 29 | - | 3 | 794 | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 18,895 | 4,771 | 50 | - | 5,258 | - | 3,078 | - | 49 | 689 |
| DEPARTMENTAL FUNDS..... | 125 | 52 | - | - | 26 | - | 3 | - | 44 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 18,627 | 4,648 | - | - | 5,232 | - | 8,058 | - | - | 689 |
| PEACE CORPS..... | 143 | 71 | 50 | - | - | - | 17 | - | 5 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 88,263 | 31,843 | 16,791 | - | 10,636 | - | 9,658 | 222 | 19,113 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 9,960 | 9,227 | 14 | - | 719 | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 28,608 | 4,863 | 3,858 | - | 650 | - | 2,294 | - | 16,943 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 4,743 | 850 | 3,409 | - | 235 | - | 85 | 164 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 15,892 | 1,370 | 3,639 | - | 4,986 | - | 3,961 | - | 1,936 | - |
| OFFICE OF THE SECRETARY..... | 8,956 | 2,260 | 5,230 | - | 852 | - | 422 | 58 | 134 | - |
| UNITED STATES COAST GUARD..... | 13,881 | 13,264 | 411 | - | 106 | - | 100 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 6,223 | 9 | 230 | - | 3,088 | - | 2,796 | - | 100 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 286 | 286 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 266 | 286 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 553 | 553 | - | - | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION..... | 433,117 | 4,774 | 3,550 | 66,633 | 96,584 | 244,689 | 4,848 | 11,308 | 93 | 638 |
| CIVIL AERONAUTICS BOARD..... | 263 | 263 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | 279 | 279 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 52,984 | 18,736 | 10,233 | - | 14,918 | 219 | 5,585 | 197 | 2,422 | 674 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1,015 | 615 | 400 | - | 99 | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 390 | 291 | - | - | - | - | - | - | - | - |
| FEDERAL TRADE COMMISSION..... | 388 | 388 | - | - | - | - | - | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | 215 | 198 | - | - | - | - | 17 | - | - | - |
| LIBRARY OF CONGRESS..... | 968 | 925 | 43 | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 1,409,732 | 679,657 | 503,645 | 2,032 | 96,718 | 102,869 | 22,603 | 874 | - | 1,334 |
| NATIONAL SCIENCE FOUNDATION..... | 274,789 | 12,700 | 2,835 | - | 223,249 | 25,668 | 7,707 | 847 | 49 | 1,764 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 29,400 | 4,498 | 8,359 | - | 10,764 | - | 5,467 | 312 | - | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 1,016 | 620 | 321 | - | - | - | 75 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 929 | 929 | - | - | - | - | - | - | - | - |
| SMALL BUSINESS ADMINISTRATION..... | 101 | 10 | - | - | 91 | - | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | 18,217 | 16,634 | - | - | 1,080 | - | - | - | 503 | - |
| TENNESSEE VALLEY AUTHORITY..... | 6,376 | 6,254 | - | - | 122 | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 3,732 | 2,233 | 1,171 | - | 100 | - | 200 | 28 | - | - |
| UNITED STATES INFORMATION AGENCY..... | 157 | 100 | 57 | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 57,762 | 56,894 | 55 | - | 343 | - | - | - | 470 | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-11. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PER-CRIMER, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|---|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|---------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | OTHER | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | | |
| TOTAL, ALL AGENCIES..... | 5,995,123 | 2,101,924 | 1,405,022 | 72,079 | 1,470,727 | 428,006 | 302,633 | 45,851 | 113,511 | 55,300 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 292,610 | 216,853 | 332 | - | 67,958 | - | 856 | - | 10 | 6,601 |
| AGRICULTURAL RESEARCH SERVICE..... | 163,281 | 154,158 | 202 | - | 2,516 | - | 429 | - | - | 5,976 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 66,999 | 2,292 | - | - | 64,380 | - | 327 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 15,688 | 15,488 | - | - | 200 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 945 | 870 | - | - | 75 | - | - | - | - | - |
| FOREST SERVICE..... | 44,950 | 43,625 | 5 | - | 685 | - | - | - | 10 | 625 |
| NATIONAL AGRICULTURAL LIBRARY..... | 259 | 102 | 30 | - | 27 | - | 100 | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 488 | 318 | 95 | - | 75 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 128,050 | 97,873 | 18,627 | - | 4,201 | - | 1,074 | - | 4,980 | 1,295 |
| BUREAU OF THE CENSUS..... | 2,165 | 2,103 | - | - | 32 | - | 30 | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,844 | 664 | 659 | - | 446 | - | 75 | - | - | - |
| MARITIME ADMINISTRATION..... | 17,493 | 888 | 16,236 | - | 369 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 28,902 | 28,088 | 33 | - | 416 | - | - | - | - | 365 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 70,545 | 59,029 | 1,699 | - | 2,938 | - | 969 | - | 4,980 | 930 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,004 | 4,004 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 2,642 | 2,642 | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | 455 | 455 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,479,333 | 557,896 | 650,401 | 2,612 | 167,220 | 32,811 | 36,794 | 28,579 | 30 | 2,990 |
| DEPARTMENT OF THE ARMY..... | 256,258 | 184,712 | 34,341 | - | 25,597 | 115 | 7,340 | 2,936 | 30 | 1,187 |
| DEPARTMENT OF THE NAVY..... | 268,000 | 154,231 | 38,166 | - | 56,183 | 12,587 | 6,694 | - | - | 139 |
| DEPARTMENT OF THE AIR FORCE..... | 644,000 | 136,966 | 438,356 | - | 54,576 | 185 | 12,999 | - | - | 918 |
| DEFENSE AGENCIES..... | 307,523 | 81,569 | 138,286 | 2,352 | 30,409 | 19,884 | 8,899 | 25,378 | - | 746 |
| DEPARTMENT-WIDE FUNDS..... | 3,552 | 418 | 1,252 | 260 | 455 | 40 | 862 | 265 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,362,222 | 281,632 | 49,019 | - | 722,507 | 4,721 | 195,219 | 3,050 | 69,278 | 36,796 |
| FOOD AND DRUG ADMINISTRATION..... | 25,922 | 14,824 | 120 | - | 7,800 | - | 1,151 | - | - | 2,027 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 189,286 | 47,403 | 5,902 | - | 69,189 | - | 32,437 | - | 18,579 | 15,776 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,030,707 | 203,549 | 41,304 | - | 601,462 | - | 143,407 | 771 | 24,686 | 15,528 |
| OFFICE OF CHILD DEVELOPMENT..... | 2,000 | 100 | - | - | 1,900 | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 68,600 | 1,785 | 1,350 | - | 27,108 | 4,721 | 10,033 | 2,279 | 21,324 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 32,200 | 1,017 | - | - | 14,838 | - | 8,191 | - | 4,689 | 3,465 |
| SOCIAL SECURITY ADMINISTRATION..... | 13,507 | 12,954 | 343 | - | 210 | - | - | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 11,862 | 50 | 9,440 | - | - | - | 1,779 | - | 593 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 134,561 | 91,865 | 7,423 | 400 | 21,617 | - | 3,210 | - | 10,046 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 474 | 137 | 210 | - | 127 | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 755 | 407 | - | - | 308 | - | - | - | 40 | - |
| BUREAU OF MINES..... | 38,056 | 34,356 | - | - | 3,000 | - | 600 | - | 100 | - |
| BUREAU OF OUTDOOR RECREATION..... | 133 | 83 | - | - | 50 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 9,018 | 3,408 | 1,417 | - | 3,645 | - | - | - | 548 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 20,132 | 10,727 | - | - | 315 | - | 155 | - | 8,935 | - |
| GEOLOGICAL SURVEY..... | 43,196 | 41,599 | 564 | - | 913 | - | - | - | 120 | - |
| OFFICE OF COAL RESEARCH..... | 4,809 | 100 | 1,959 | - | 1,250 | - | 1,500 | - | - | - |
| OFFICE OF SALINE WATER..... | 5,000 | 210 | 1,900 | 400 | 2,090 | - | 400 | - | - | - |
| OFFICE OF THE SECRETARY..... | 583 | 33 | 400 | - | 150 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 12,405 | 805 | 973 | - | 9,769 | - | 555 | - | 303 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 6,210 | 327 | 1,266 | - | 1,819 | - | 521 | 157 | 2,120 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 1,560 | 39 | 421 | - | 422 | - | 521 | 157 | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 4,650 | 288 | 845 | - | 1,397 | - | - | - | 2,120 | - |

CONTINUED ON NEXT PAGE

TABLE C-11. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN | |
|---|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|--------|---------|---|
| | | | UNITED STATES AND TERRITORIES | | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | | |
| DEPARTMENT OF LABOR, TOTAL..... | 12,495 | 7,339 | 661 | - | 1,652 | - | 1,917 | - | 926 | - | |
| BUREAU OF LABOR STATISTICS..... | 2,615 | 2,615 | - | - | - | - | - | - | - | - | |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 720 | 720 | - | - | - | - | - | - | - | - | |
| MANPOWER ADMINISTRATION..... | 6,610 | 1,454 | 661 | - | 1,652 | - | 1,917 | - | 926 | - | |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,550 | 2,550 | - | - | - | - | - | - | - | - | |
| POSTAL SERVICE..... | 5,568 | 1,670 | 3,225 | - | 50 | - | 308 | 315 | - | - | |
| DEPARTMENT OF STATE, TOTAL..... | 25,359 | 4,653 | 60 | - | 12,223 | - | 5,741 | - | 163 | 2,519 | |
| DEPARTMENTAL FUNDS..... | 350 | 109 | - | - | 35 | - | 43 | - | 163 | - | |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 24,906 | 4,513 | - | - | 12,188 | - | 5,686 | - | - | 2,519 | |
| PEACE CORPS..... | 103 | 31 | 60 | - | - | - | 12 | - | - | - | |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 110,895 | 45,143 | 32,769 | - | 9,336 | - | 5,736 | 372 | 17,491 | 48 | |
| FEDERAL AVIATION ADMINISTRATION..... | 23,018 | 18,900 | 3,385 | - | 733 | - | - | - | - | - | |
| FEDERAL HIGHWAY ADMINISTRATION..... | 27,468 | 3,829 | 3,716 | - | 598 | - | 2,300 | 372 | 17,025 | - | |
| FEDERAL RAILROAD ADMINISTRATION..... | 9,846 | 1,860 | 6,902 | - | 516 | - | 148 | - | - | 48 | |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 13,072 | 3,052 | 4,395 | - | 3,040 | - | 2,350 | - | 235 | - | |
| OFFICE OF THE SECRETARY..... | 15,594 | 2,240 | 12,938 | - | 416 | - | - | - | - | - | |
| UNITED STATES COAST GUARD..... | 15,931 | 14,510 | 866 | - | 147 | - | 408 | - | - | - | |
| URBAN MASS TRANSPORTATION ADMIN..... | 5,966 | 752 | 567 | - | 3,886 | - | 530 | - | 231 | - | |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 373 | 373 | - | - | - | - | - | - | - | - | |
| BUREAU OF ENGRAVING AND PRINTING..... | 373 | 373 | - | - | - | - | - | - | - | - | |
| OTHER AGENCIES | | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 477 | 477 | - | 66,617 | - | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION..... | 423,415 | 4,705 | 2,923 | - | 91,032 | 241,300 | 4,364 | 11,793 | 50 | 631 | |
| CIVIL AERONAUTICS BOARD..... | 270 | 270 | - | - | - | - | - | - | - | - | |
| CIVIL SERVICE COMMISSION..... | 327 | 327 | - | - | - | - | - | - | - | - | |
| ENVIRONMENTAL PROTECTION AGENCY..... | 61,482 | 19,699 | 16,525 | - | 15,092 | 230 | 5,976 | 211 | 2,469 | 1,280 | |
| FEDERAL COMMUNICATIONS COMMISSION..... | 638 | 638 | - | - | - | - | - | - | - | - | |
| FEDERAL HOME LOAN BANK BOARD..... | 388 | 388 | - | - | - | - | - | - | - | - | |
| FEDERAL TRADE COMMISSION..... | 467 | 467 | - | - | - | - | - | - | - | - | |
| GENERAL SERVICES ADMINISTRATION..... | 83 | 65 | - | - | - | - | 18 | - | - | - | |
| LIBRARY OF CONGRESS..... | 1,006 | 1,006 | - | - | - | - | - | - | - | - | |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 1,477,583 | 652,793 | 597,251 | 1,450 | 88,513 | 117,566 | 18,340 | 417 | - | 1,253 | |
| NATIONAL SCIENCE FOUNDATION..... | 327,286 | 20,522 | 3,506 | 1,000 | 250,874 | 31,378 | 12,085 | 657 | 4,377 | 1,887 | |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 39,150 | 6,014 | 10,819 | - | 14,797 | - | 7,120 | 300 | - | - | |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 995 | 670 | 250 | - | - | - | 75 | - | - | - | |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 990 | 990 | - | - | - | - | - | - | - | - | |
| SMITHSONIAN INSTITUTION..... | 20,346 | 18,842 | - | - | 1,064 | - | - | - | 440 | - | |
| TENNESSEE VALLEY AUTHORITY..... | 7,478 | 7,335 | - | - | 143 | - | - | - | - | - | |
| U.S. ARMS CONTROL & DISARMAMENT AGENCY... | 2,335 | 1,335 | 400 | - | 120 | - | 400 | - | 80 | - | |
| UNITED STATES INFORMATION AGENCY..... | 160 | 100 | 60 | - | - | - | - | - | - | - | |
| VETERANS ADMINISTRATION..... | 60,709 | 59,677 | 65 | - | 509 | - | - | - | 458 | - | |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-12. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | OTHER | FOREIGN |
|--|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|---------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | | |
| TOTAL, ALL AGENCIES..... | 6,643,584 | 2,223,337 | 1,674,321 | 75,176 | 1,668,530 | 435,723 | 330,753 | 50,047 | 123,888 | 61,809 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 303,470 | 217,301 | 297 | - | 73,802 | - | 860 | - | 10 | 11,200 |
| AGRICULTURAL RESEARCH SERVICE..... | 167,378 | 154,794 | 197 | - | 2,018 | - | 369 | - | - | 10,000 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 73,602 | 2,447 | - | - | 70,814 | - | 341 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 15,428 | 15,228 | - | - | 200 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 943 | 933 | - | - | 10 | - | - | - | - | - |
| FOREST SERVICE..... | 45,368 | 43,468 | 5 | - | 685 | - | - | - | 10 | 1,200 |
| NATIONAL AGRICULTURAL LIBRARY..... | 263 | 113 | - | - | - | - | 150 | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 488 | 318 | 95 | - | 75 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 143,772 | 115,554 | 15,072 | - | 5 | - | 1,306 | - | 5,225 | 1,076 |
| BUREAU OF THE CENSUS..... | 1,904 | 1,819 | - | - | 55 | - | 30 | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,591 | 666 | 435 | - | 390 | - | 100 | - | - | - |
| MARITIME ADMINISTRATION..... | 14,445 | 845 | 12,530 | - | 1,070 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 30,480 | 29,767 | 50 | - | 461 | - | - | - | - | 202 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 85,374 | 72,479 | 2,057 | - | 3,563 | - | 1,176 | - | 5,225 | 874 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,508 | 4,508 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 5,000 | 5,000 | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | 470 | 470 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,633,562 | 601,302 | 737,325 | 3,195 | 187,054 | 34,347 | 34,653 | 32,244 | 520 | 2,922 |
| DEPARTMENT OF THE ARMY..... | 280,428 | 207,995 | 33,091 | - | 27,594 | 850 | 5,330 | 3,980 | 520 | 1,068 |
| DEPARTMENT OF THE NAVY..... | 292,000 | 163,960 | 47,886 | - | 58,097 | 14,127 | 7,051 | 770 | - | 109 |
| DEPARTMENT OF THE AIR FORCE..... | 698,000 | 146,394 | 485,095 | - | 52,699 | 250 | 12,712 | - | - | 850 |
| DEFENSE AGENCIES..... | 359,434 | 82,453 | 169,984 | 3,040 | 48,220 | 19,080 | 8,650 | 27,112 | - | 895 |
| DEPARTMENT-WIDE FUNDS..... | 3,700 | 500 | 1,269 | 155 | 444 | 40 | 910 | 382 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,489,758 | 298,136 | 90,516 | - | 775,486 | 4,000 | 212,069 | 3,037 | 67,541 | 38,973 |
| FOOD AND DRUG ADMINISTRATION..... | 33,916 | 20,249 | 144 | - | 7,000 | - | 1,381 | - | - | 5,142 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 188,491 | 48,621 | 5,988 | - | 71,598 | - | 33,371 | - | 19,210 | 9,703 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,154,422 | 213,421 | 83,081 | - | 660,043 | - | 157,204 | 837 | 25,758 | 14,078 |
| OFFICE OF CHILD DEVELOPMENT..... | 3,500 | 140 | - | - | 3,360 | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 63,213 | 1,890 | 1,200 | - | 20,286 | 4,000 | 14,117 | 2,200 | 19,520 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 31,930 | 982 | - | - | 12,599 | - | 5,996 | - | 3,053 | 9,300 |
| SOCIAL SECURITY ADMINISTRATION..... | 14,286 | 12,833 | 103 | - | 600 | - | - | - | - | 750 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP... | 12,740 | 50 | 10,142 | - | 127 | - | 1,911 | - | 510 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 144,366 | 94,461 | 9,791 | 350 | 26,300 | - | 2,555 | - | 10,534 | 375 |
| BONNEVILLE POWER ADMINISTRATION..... | 495 | 98 | 253 | - | 144 | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 793 | 448 | - | - | 305 | - | - | - | 40 | - |
| BUREAU OF MINES..... | 39,541 | 33,841 | - | - | 5,000 | - | 600 | - | 100 | - |
| BUREAU OF OUTDOOR RECREATION..... | 76 | 76 | - | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 9,523 | 3,816 | 1,681 | - | 3,507 | - | - | - | 519 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 21,158 | 11,203 | - | - | 400 | - | 155 | - | 9,400 | - |
| GEOLOGICAL SURVEY..... | 48,530 | 43,678 | 2,033 | - | 2,644 | - | - | - | 175 | - |
| OFFICE OF COAL RESEARCH..... | 4,059 | 100 | 1,809 | - | 1,250 | - | 900 | - | - | - |
| OFFICE OF SALINE WATER..... | 5,475 | 210 | 2,325 | 350 | 2,190 | - | 400 | - | - | - |
| OFFICE OF THE SECRETARY..... | 1,193 | 68 | 190 | - | 560 | - | - | - | - | 375 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 13,523 | 923 | 1,500 | - | 10,300 | - | 500 | - | 300 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 15,162 | 1,005 | 3,832 | - | 3,573 | - | 890 | 127 | 5,735 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 2,162 | 63 | 509 | - | 573 | - | 890 | 127 | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 13,000 | 942 | 3,323 | - | 3,000 | - | - | - | 5,735 | - |

CONTINUED ON NEXT PAGE

TABLE C-12. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA- MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | FOREIGN | |
|---|-----------|------------------------|-------------------------------|---|---------------------------------|---|--|--|---------|-------|
| | | | EXTRAMURAL | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN. BY NON- PROFIT INSTI- TUTIONS | | OTHER |
| DEPARTMENT OF LABOR, TOTAL..... | 12,642 | 7,432 | 668 | - | 1,670 | - | 1,937 | - | 935 | - |
| BUREAU OF LABOR STATISTICS..... | 2,617 | 2,617 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 812 | 812 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,680 | 1,470 | 668 | - | 1,670 | - | 1,937 | - | 935 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,533 | 2,533 | - | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 5,860 | 2,506 | 2,639 | - | 100 | - | 300 | 315 | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 28,204 | 4,749 | - | - | 14,576 | - | 6,166 | - | 463 | 2,250 |
| DEPARTMENTAL FUNDS..... | 650 | 109 | - | - | 35 | - | 43 | - | 463 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 27,554 | 4,640 | - | - | 14,541 | - | 6,123 | - | - | 2,250 |
| DEPARTMENT OF TRANSPORTATION, TOTAL.... | 183,949 | 58,756 | 82,651 | 366 | 11,146 | - | 10,500 | 300 | 20,230 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 60,371 | 22,871 | 37,220 | - | 280 | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 32,148 | 4,482 | 4,350 | - | 586 | - | 2,800 | - | 19,930 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 10,500 | 1,933 | 7,901 | 366 | - | - | - | 300 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 22,950 | 3,605 | 8,545 | - | 6,100 | - | 4,700 | - | - | - |
| OFFICE OF THE SECRETARY..... | 31,000 | 8,000 | 21,400 | - | 1,000 | - | 500 | - | 100 | - |
| UNITED STATES COAST GUARD..... | 20,568 | 17,263 | 2,325 | - | 180 | - | 800 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 6,412 | 602 | 910 | - | 3,000 | - | 1,700 | - | 200 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 390 | 390 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 390 | 390 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 487 | 487 | - | 65,605 | 82,884 | 238,280 | 4,326 | 11,880 | - | 627 |
| ATOMIC ENERGY COMMISSION..... | 411,384 | 4,670 | 3,062 | - | - | - | - | - | 50 | - |
| CIVIL AERONAUTICS BOARD..... | 331 | 331 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | 350 | 350 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 78,730 | 27,904 | 23,010 | - | 18,233 | 183 | 5,773 | 164 | 2,427 | 1,036 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 869 | 669 | 160 | - | 40 | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 497 | 497 | - | - | - | - | - | - | - | - |
| FEDERAL TRADE COMMISSION..... | 460 | 460 | - | - | - | - | - | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | 20 | 20 | - | - | - | - | - | - | - | - |
| LIBRARY OF CONGRESS..... | 1,175 | 1,175 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 1,761,917 | 661,740 | 679,401 | 2,660 | 71,462 | 123,959 | 20,661 | 780 | - | 1,254 |
| NATIONAL SCIENCE FOUNDATION..... | 470,036 | 21,061 | 4,000 | 3,000 | 376,454 | 34,954 | 18,796 | 1,200 | 8,475 | 2,096 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 42,600 | 7,394 | 11,130 | - | 16,656 | - | 7,420 | - | - | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 535 | 375 | 85 | - | - | - | 75 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 1,080 | 1,080 | - | - | - | - | - | - | - | - |
| SMALL BUSINESS ADMINISTRATION..... | 205 | 10 | - | - | 90 | - | - | - | 105 | - |
| SMITHSONIAN INSTITUTION..... | 27,247 | 23,985 | - | - | 2,592 | - | - | - | 670 | - |
| TENNESSEE VALLEY AUTHORITY..... | 8,197 | 8,100 | - | - | 97 | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 2,420 | 1,300 | 425 | - | 140 | - | 555 | - | - | - |
| UNITED STATES INFORMATION AGENCY..... | 150 | 100 | 50 | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 61,019 | 59,987 | 65 | - | 509 | - | - | - | 458 | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-13. FEDERAL OBLIGATIONS FOR RESEARCH, BY DETAILED FIELD OF SCIENCE,
FISCAL YEARS 1970, 1971, AND 1972
(THOUSANDS OF DOLLARS)

| FIELD OF SCIENCE | ACTUAL, 1970 | ESTIMATES | |
|--|--------------|-----------|-----------|
| | | 1971 | 1972 |
| TOTAL, ALL FIELDS..... | 5,601,906 | 5,995,123 | 6,643,584 |
| LIFE SCIENCES, TOTAL..... | 1,533,432 | 1,735,136 | 1,945,097 |
| BIOLOGICAL..... | 684,782 | 735,295 | 850,875 |
| CLINICAL MEDICAL..... | 685,633 | 804,177 | 874,284 |
| OTHER MEDICAL SCIENCES..... | 144,900 | 168,361 | 193,169 |
| LIFE SCIENCES, NEC..... | 18,117 | 27,303 | 26,769 |
| PSYCHOLOGY, TOTAL..... | 113,328 | 125,166 | 140,413 |
| BIOLOGICAL ASPECTS..... | 45,141 | 47,379 | 58,390 |
| SOCIAL ASPECTS..... | 44,175 | 74,569 | 79,054 |
| PSYCHOLOGICAL SCIENCES, NEC..... | 24,012 | 3,218 | 2,969 |
| PHYSICAL SCIENCES, TOTAL..... | 1,010,450 | 1,025,477 | 1,086,483 |
| ASTRONOMY..... | 210,956 | 222,196 | 198,772 |
| CHEMISTRY..... | 243,894 | 246,627 | 304,348 |
| PHYSICS..... | 538,333 | 536,306 | 568,421 |
| PHYSICAL SCIENCES, NEC..... | 17,273 | 20,348 | 14,942 |
| ENVIRONMENTAL SCIENCES, TOTAL..... | 586,631 | 632,124 | 701,988 |
| ATMOSPHERIC SCIENCES..... | 287,737 | 311,193 | 340,301 |
| GEOLOGICAL SCIENCES..... | 188,897 | 193,223 | 216,329 |
| OCEANOGRAPHY (EXCLUDING BIOLOGICAL)..... | 91,222 | 97,290 | 112,148 |
| ENVIRONMENTAL SCIENCE, NEC..... | 18,775 | 30,418 | 33,210 |
| MATHEMATICS..... | 102,138 | 103,963 | 111,770 |
| ENGINEERING, TOTAL..... | 1,967,739 | 2,013,906 | 2,197,655 |
| AERONAUTICAL..... | 466,464 | 473,635 | 474,598 |
| ASTRONAUTICAL..... | 289,525 | 287,850 | 328,946 |
| CHEMICAL..... | 117,224 | 113,299 | 122,850 |
| CIVIL..... | 60,771 | 80,425 | 106,178 |
| ELECTRICAL..... | 354,351 | 356,340 | 393,633 |
| MECHANICAL..... | 140,011 | 145,327 | 143,849 |
| METALLURGY & MATERIALS..... | 151,549 | 154,734 | 159,750 |
| ENGINEERING, NEC..... | 387,844 | 402,296 | 467,851 |
| SOCIAL SCIENCES, TOTAL..... | 215,852 | 272,994 | 311,018 |
| ANTHROPOLOGY..... | 8,763 | 10,412 | 15,128 |
| ECONOMICS..... | 84,332 | 89,344 | 98,706 |
| HISTORY..... | 4,542 | 5,006 | 5,181 |
| LINGUISTICS..... | 1,989 | 2,012 | 2,636 |
| POLITICAL SCIENCE..... | 7,417 | 6,070 | 7,327 |
| SOCIOLOGY..... | 38,487 | 50,009 | 71,840 |
| SOCIAL SCIENCES, NEC..... | 70,322 | 110,141 | 110,200 |
| OTHER SCIENCES, NEC..... | 72,336 | 86,357 | 149,160 |

TABLE C-14. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|-----------|---------------|------------|-------------------|------------------------|-------------|-------------|-----------------|--------------------|
| TOTAL, ALL AGENCIES..... | 5,601,906 | 1,533,432 | 113,328 | 1,010,450 | 586,631 | 102,138 | 1,967,739 | 215,852 | 72,336 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 271,925 | 166,681 | 32 | 36,908 | 4,838 | 686 | 28,909 | 33,663 | 208 |
| AGRICULTURAL RESEARCH SERVICE..... | 152,468 | 98,631 | 32 | 30,757 | 859 | 332 | 20,707 | 1,150 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 61,052 | 41,983 | - | 3,053 | 350 | - | 2,092 | 13,574 | - |
| ECONOMIC RESEARCH SERVICE..... | 14,904 | - | - | - | - | - | - | 14,904 | - |
| FARMER COOPERATIVE SERVICE..... | 884 | - | - | - | - | - | - | 884 | - |
| FOREST SERVICE..... | 41,933 | 26,067 | - | 3,098 | 3,629 | 145 | 6,110 | 2,884 | 208 |
| NATIONAL AGRICULTURAL LIBRARY..... | 208 | - | - | - | - | 209 | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 476 | - | - | - | - | - | - | 267 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 94,114 | 24,157 | 1,096 | 17,156 | 22,090 | 1,347 | 15,689 | 10,826 | 1,753 |
| BUREAU OF THE CENSUS..... | 1,665 | - | 567 | - | - | 266 | - | 832 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 3,809 | - | - | - | - | - | - | 3,809 | - |
| MARITIME ADMINISTRATION..... | 4,878 | - | - | - | - | 89 | 3,268 | 1,521 | - |
| NATIONAL BUREAU OF STANDARDS..... | 27,055 | - | - | 15,779 | - | 992 | 9,456 | - | 828 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 52,915 | 24,157 | 529 | 1,377 | 22,090 | - | 2,965 | 1,159 | 638 |
| OFFICE OF BUSINESS ECONOMICS..... | 3,505 | - | - | - | - | - | - | 3,505 | - |
| PATENT OFFICE..... | 287 | - | - | - | - | - | - | - | 287 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,556,783 | 104,003 | 25,594 | 219,639 | 128,253 | 61,899 | 972,775 | 4,693 | 39,927 |
| DEPARTMENT OF THE ARMY..... | 291,536 | 52,863 | 6,942 | 64,021 | 13,941 | 5,620 | 129,057 | 2,767 | 16,325 |
| DEPARTMENT OF THE NAVY..... | 272,922 | 15,595 | 6,257 | 62,509 | 46,895 | 29,026 | 112,640 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 665,000 | 26,707 | 6,384 | 31,536 | 25,800 | 6,108 | 568,265 | 200 | - |
| DEFENSE AGENCIES..... | 323,234 | 3,218 | 5,728 | 60,892 | 41,617 | 20,715 | 161,760 | 1,400 | 22,904 |
| DEPARTMENT-WIDE FUNDS..... | 4,091 | 620 | 283 | 681 | - | 430 | 1,053 | 326 | 698 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,129,271 | 897,108 | 60,484 | 41,283 | 630 | 8,170 | 22,667 | 84,368 | 14,561 |
| FOOD AND DRUG ADMINISTRATION..... | 21,805 | 15,492 | - | 6,313 | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 160,358 | 99,050 | 33,971 | 734 | - | 349 | 87 | 25,526 | 641 |
| NATIONAL INSTITUTES OF HEALTH..... | 868,788 | 770,946 | 17,715 | 34,256 | 630 | 7,821 | 22,455 | 1,085 | 13,920 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | 500 | - | - | - | - | - | 500 | - |
| OFFICE OF EDUCATION..... | 33,066 | - | 6,825 | - | - | - | 145 | 26,241 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 31,885 | 11,120 | 1,973 | - | - | - | - | 18,647 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 12,369 | - | - | - | - | - | - | 12,369 | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 7,097 | - | - | - | - | - | 7,097 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 121,692 | 20,716 | 58 | 13,952 | 43,570 | 1,816 | 39,892 | 1,494 | 194 |
| BONNEVILLE POWER ADMINISTRATION..... | 524 | - | - | 25 | 31 | 20 | 448 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 710 | 650 | - | - | - | - | - | 60 | - |
| BUREAU OF MINES..... | 33,894 | - | - | 7,462 | 1,821 | 571 | 24,040 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 92 | - | - | - | - | - | - | 92 | - |
| BUREAU OF RECLAMATION..... | 7,202 | 25 | - | - | 4,810 | - | 2,294 | 73 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 18,041 | 18,041 | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 40,963 | - | - | 3,891 | 34,748 | 950 | 1,374 | - | - |
| OFFICE OF COAL RESEARCH..... | 2,341 | - | - | - | - | - | 2,341 | - | - |
| OFFICE OF SALINE WATER..... | 7,175 | - | - | 2,174 | - | - | 5,001 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 10,750 | 2,000 | 58 | 400 | 2,160 | 275 | 4,394 | 1,269 | 194 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 5,334 | 326 | 1,239 | 630 | - | 240 | 363 | 2,536 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 839 | 326 | 114 | - | - | - | - | 399 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 4,495 | - | 1,125 | 630 | - | 240 | 363 | 2,137 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 11,286 | - | - | - | - | - | - | 11,286 | - |
| BUREAU OF LABOR STATISTICS..... | 2,566 | - | - | - | - | - | - | 2,566 | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 290 | - | - | - | - | - | - | 290 | - |
| MANPOWER ADMINISTRATION..... | 6,214 | - | - | - | - | - | - | 6,214 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,216 | - | - | - | - | - | - | 2,216 | - |

CONTINUED ON NEXT PAGE

TABLE C-14. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOL- OGY | PHYSICAL SCIENCES | ENVIRON- MENTAL SCIENCES | MATHE- MATICS | ENGI- NEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|---|---------------|---------------|-----------------|-------------------|-----------------------------|------------------|------------------|-----------------|-----------------------|
| POSTAL SERVICE..... | 4,577 | - | - | - | - | - | - | - | 4,577 |
| DEPARTMENT OF STATE, TOTAL..... | 18,895 | 14,421 | 143 | - | - | - | 1,392 | 2,939 | - |
| DEPARTMENTAL FUNDS..... | 125 | - | - | - | - | - | - | 125 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... PEACE CORPS..... | 18,627 143 | 14,421 - | - 143 | - - | - - | - - | 1,392 - | 2,814 - | - - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 88,263 | 3,145 | 3,701 | 32 | 15,379 | 2,419 | 51,313 | 11,549 | 725 |
| FEDERAL AVIATION ADMINISTRATION..... | 9,960 | 1,484 | 395 | - | 400 | 350 | 7,331 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 28,608 | - | - | - | - | - | 27,177 | 1,431 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 4,743 | - | - | - | - | 400 | 4,020 | 323 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 15,892 | 1,651 | 3,286 | - | - | 1,554 | 8,293 | 1,108 | - |
| OFFICE OF THE SECRETARY..... | 8,956 | - | - | - | 249 | - | 1,902 | 6,805 | - |
| UNITED STATES COAST GUARD..... | 13,881 | 10 | - | 32 | 13,244 | - | 595 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 6,223 | - | 20 | - | 1,486 | 115 | 1,995 | 1,882 | 725 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 286 | - | - | 270 | - | - | 16 | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 286 | - | - | 270 | - | - | 16 | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 553 | - | - | - | - | - | - | 553 | - |
| ATOMIC ENERGY COMMISSION..... | 433,117 | 80,719 | - | 300,278 | 9,462 | 5,779 | 36,879 | - | - |
| CIVIL AERONAUTICS BOARD..... | 263 | - | - | - | - | - | - | 263 | - |
| CIVIL SERVICE COMMISSION..... | 279 | - | 279 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 52,984 | 19,311 | 8 | 8,430 | 4,801 | 193 | 19,718 | 523 | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1,015 | - | - | - | - | - | 1,015 | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 390 | - | - | - | - | - | - | 390 | - |
| FEDERAL TRADE COMMISSION..... | 388 | - | - | - | - | - | - | 388 | - |
| GENERAL SERVICES ADMINISTRATION..... | 215 | - | - | - | - | - | 194 | - | 21 |
| LIBRARY OF CONGRESS..... | 968 | - | - | - | - | - | - | - | 968 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 1,409,732 | 78,229 | 3,664 | 290,271 | 297,629 | 2,350 | 736,359 | 1,230 | - |
| NATIONAL SCIENCE FOUNDATION..... | 274,789 | 60,119 | 7,720 | 76,276 | 59,270 | 17,161 | 25,927 | 19,582 | 8,734 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 29,400 | 2,600 | 5,000 | - | - | - | - | 21,800 | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 1,016 | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 929 | 284 | 10 | 237 | 83 | 18 | 531 | - | 485 |
| SMALL BUSINESS ADMINISTRATION..... | 101 | - | - | - | - | - | 279 | 18 | - |
| SMITHSONIAN INSTITUTION..... | 18,217 | 7,709 | - | 3,195 | 586 | - | - | 101 | - |
| TENNESSEE VALLEY AUTHORITY..... | 6,376 | 1,727 | - | 890 | - | - | - | 6,727 | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 3,732 | - | - | 303 | 40 | - | 3,406 | 353 | - |
| UNITED STATES INFORMATION AGENCY..... | 157 | - | - | - | - | - | 2,811 | 395 | 183 |
| VETERANS ADMINISTRATION..... | 57,762 | 52,177 | 4,300 | 700 | - | 60 | 157 | - | - |

TABLE C-15. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOL- OGY | PHYSICAL SCIENCES | ENVIRON- MENTAL SCIENCES | MATHE- MATICS | ENGI- NEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|---|-----------|---------------|-----------------|-------------------|-----------------------------|------------------|------------------|-----------------|-----------------------|
| TOTAL, ALL AGENCIES..... | 5,995,123 | 1,735,136 | 125,166 | 1,025,477 | 632,124 | 103,963 | 2,013,906 | 272,994 | 86,357 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 292,610 | 180,306 | 31 | 38,910 | 5,196 | 705 | 31,137 | 36,066 | 259 |
| AGRICULTURAL RESEARCH SERVICE..... | 163,281 | 106,391 | - | 32,223 | 911 | 334 | 22,246 | 1,145 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 66,999 | 46,087 | - | 3,350 | 371 | - | 2,295 | 14,896 | - |
| ECONOMIC RESEARCH SERVICE..... | 15,688 | - | - | - | - | - | - | 15,688 | - |
| FARMER COOPERATIVE SERVICE..... | 945 | - | - | - | - | - | - | 945 | - |
| FOREST SERVICE..... | 44,950 | 27,828 | - | 3,337 | 3,914 | 156 | 6,596 | 3,119 | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 259 | - | - | - | - | - | - | - | 259 |
| STATISTICAL REPORTING SERVICE..... | 488 | - | - | - | - | 215 | - | 273 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 128,050 | 32,204 | 1,449 | 19,552 | 29,450 | 1,820 | 30,817 | 10,060 | 2,698 |
| BUREAU OF THE CENSUS..... | 2,165 | - | 744 | - | - | 347 | - | 1,074 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,844 | - | - | - | - | - | - | 1,844 | - |
| MARITIME ADMINISTRATION..... | 17,493 | - | - | - | - | - | 15,905 | 1,588 | - |
| NATIONAL BUREAU OF STANDARDS..... | 28,902 | - | - | 16,573 | - | 1,035 | 9,901 | - | 1,393 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 70,545 | 32,204 | 705 | 1,835 | 29,450 | - | 3,951 | 1,550 | 850 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,004 | - | - | 1,144 | - | 438 | 1,060 | 4,004 | - |
| OFFICE OF TELECOMMUNICATIONS..... | 2,642 | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | 455 | - | - | - | - | - | - | - | 455 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,479,333 | 93,210 | 28,526 | 197,686 | 132,557 | 61,156 | 922,162 | 4,552 | 39,484 |
| DEPARTMENT OF THE ARMY..... | 256,258 | 45,022 | 5,881 | 52,258 | 13,214 | 5,477 | 118,351 | 2,443 | 13,612 |
| DEPARTMENT OF THE NAVY..... | 268,000 | 16,143 | 5,852 | 61,260 | 44,681 | 27,829 | 111,774 | - | 461 |
| DEPARTMENT OF THE AIR FORCE..... | 644,000 | 26,501 | 11,230 | 26,493 | 27,188 | 6,211 | 546,077 | 300 | - |
| DEFENSE AGENCIES..... | 307,523 | 5,074 | 5,271 | 57,075 | 47,474 | 21,291 | 145,071 | 1,359 | 24,908 |
| DEPARTMENT-WIDE FUNDS..... | 3,552 | 470 | 292 | 600 | - | 348 | 889 | 450 | 503 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,362,222 | 1,060,505 | 69,178 | 52,315 | 763 | 10,092 | 27,294 | 124,484 | 17,591 |
| FOOD AND DRUG ADMINISTRATION..... | 25,922 | 16,174 | - | 9,748 | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 189,286 | 117,063 | 35,481 | 1,156 | - | 635 | 66 | 33,479 | 1,406 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,030,707 | 913,938 | 20,574 | 41,411 | 763 | 9,457 | 27,078 | 1,301 | 16,185 |
| OFFICE OF CHILD DEVELOPMENT..... | 2,000 | 500 | 500 | - | - | - | - | 1,000 | - |
| OFFICE OF EDUCATION..... | 68,600 | - | 9,548 | - | - | - | 150 | 59,052 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 32,200 | 12,830 | 3,075 | - | - | - | - | 16,145 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 13,507 | - | - | - | - | - | - | 13,507 | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 11,862 | - | - | - | - | - | 11,862 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 134,561 | 23,159 | 62 | 13,495 | 48,361 | 2,136 | 45,405 | 1,719 | 224 |
| BONNEVILLE POWER ADMINISTRATION..... | 474 | - | - | 27 | 46 | 20 | 381 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 755 | 698 | - | - | - | - | - | 57 | - |
| BUREAU OF MINES..... | 38,056 | - | - | 7,355 | 2,540 | 750 | 27,411 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 133 | - | - | - | - | - | - | 133 | - |
| BUREAU OF RECLAMATION..... | 9,018 | 22 | - | - | 6,525 | - | 2,406 | 65 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 20,132 | 20,132 | - | 4,054 | 36,757 | 994 | 1,391 | - | - |
| GEOLOGICAL SURVEY..... | 43,196 | - | - | - | - | - | 4,809 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,809 | - | - | 1,600 | - | - | 3,400 | - | - |
| OFFICE OF SALINE WATER..... | 5,000 | - | - | - | - | - | 583 | - | - |
| OFFICE OF THE SECRETARY..... | 583 | - | 62 | 459 | 2,493 | 372 | 5,024 | 1,464 | 224 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 12,405 | 2,307 | - | - | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 6,210 | 778 | 1,191 | 719 | - | 295 | 363 | 2,864 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 1,560 | 778 | 16 | 39 | - | - | - | 727 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 4,650 | - | 1,175 | 680 | - | 295 | 363 | 2,137 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 12,495 | - | - | - | - | - | - | 12,495 | - |
| BUREAU OF LABOR STATISTICS..... | 2,615 | - | - | - | - | - | - | 2,615 | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 720 | - | - | - | - | - | - | 720 | - |

TABLE C-15. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|-----------|---------------|------------|-------------------|------------------------|-------------|-------------|-----------------|--------------------|
| POSTAL SERVICE..... | 5,568 | - | - | - | - | - | - | - | 5,568 |
| DEPARTMENT OF STATE, TOTAL..... | 25,359 | 18,731 | 103 | - | 60 | - | 1,210 | 5,255 | - |
| DEPARTMENTAL FUNDS..... | 350 | - | - | - | - | - | - | 350 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 24,906 | 18,731 | - | - | 60 | - | 1,210 | 4,905 | - |
| PEACE CORPS..... | 103 | - | 103 | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 110,895 | 3,127 | 2,737 | 95 | 15,742 | 1,553 | 75,640 | 11,791 | 210 |
| FEDERAL AVIATION ADMINISTRATION..... | 23,018 | 1,667 | 443 | - | 768 | 500 | 19,640 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 27,468 | - | - | - | - | - | 26,012 | 1,456 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 9,846 | 310 | 215 | - | - | - | 5,986 | 3,335 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 13,072 | 1,150 | 2,059 | - | - | 848 | 8,940 | 75 | - |
| OFFICE OF THE SECRETARY..... | 15,594 | - | - | 95 | 694 | - | 10,000 | 4,900 | - |
| UNITED STATES COAST GUARD..... | 15,931 | - | - | - | 14,180 | - | 1,656 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 5,966 | - | 20 | - | 100 | 205 | 3,406 | 2,025 | 210 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 373 | - | - | 355 | - | - | 18 | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 373 | - | - | 355 | - | - | 18 | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS..... | 477 | - | - | - | - | - | - | 477 | - |
| ATOMIC ENERGY COMMISSION..... | 423,415 | 79,652 | - | 292,395 | 9,298 | 5,370 | 36,700 | - | - |
| CIVIL AERONAUTICS BOARD..... | 270 | - | - | - | - | - | - | 270 | - |
| CIVIL SERVICE COMMISSION..... | 327 | - | 327 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 61,482 | 21,674 | 7 | 9,471 | 5,609 | 274 | 23,781 | 666 | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 638 | - | - | - | - | - | 638 | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 388 | - | - | - | - | - | - | 388 | - |
| FEDERAL TRADE COMMISSION..... | 467 | - | - | - | - | - | - | 467 | - |
| GENERAL SERVICES ADMINISTRATION..... | 83 | - | - | - | - | - | 63 | - | - |
| LIBRARY OF CONGRESS..... | 1,006 | - | - | - | - | - | - | - | 20 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 1,477,173 | 77,898 | 3,384 | 313,744 | 314,388 | 1,410 | 766,759 | - | 1,306 |
| NATIONAL SCIENCE FOUNDATION..... | 327,286 | 71,290 | 8,660 | 80,976 | 69,915 | 19,073 | 33,290 | 25,444 | 18,638 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 39,150 | 6,900 | 5,000 | - | - | - | - | 27,250 | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 995 | - | - | - | - | - | 498 | - | 497 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 990 | 303 | 11 | 253 | 88 | 19 | 297 | 19 | - |
| SMITHSONIAN INSTITUTION..... | 20,346 | 8,606 | - | 3,560 | 651 | - | - | 7,529 | - |
| TENNESSEE VALLEY AUTHORITY..... | 7,478 | 1,949 | - | 976 | - | - | 4,125 | 428 | - |
| US ARMS CONTROL & DISARMAMENT AGENCY..... | 2,335 | - | - | 225 | 46 | - | 1,317 | 585 | 162 |
| UNITED STATES INFORMATION AGENCY..... | 160 | - | - | - | - | - | 160 | - | - |
| VETERANS ADMINISTRATION..... | 60,709 | 54,844 | 4,500 | 750 | - | 60 | 370 | 185 | - |

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|-----------|---------------|------------|-------------------|------------------------|-------------|-------------|-----------------|--------------------|
| TOTAL, ALL AGENCIES..... | 6,643,584 | 1,945,097 | 140,413 | 1,086,483 | 701,988 | 111,770 | 2,197,655 | 311,018 | 149,160 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 303,470 | 189,267 | 31 | 39,247 | 5,265 | 704 | 31,420 | 37,273 | 263 |
| AGRICULTURAL RESEARCH SERVICE..... | 167,378 | 110,455 | 31 | 32,215 | 912 | 332 | 22,287 | 1,146 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 73,602 | 50,609 | - | 3,680 | 428 | - | 2,522 | 16,363 | - |
| ECONOMIC RESEARCH SERVICE..... | 15,428 | - | - | - | - | - | - | 15,428 | - |
| FARMER COOPERATIVE SERVICE..... | 943 | - | - | - | - | - | - | 943 | - |
| FOREST SERVICE..... | 45,368 | 28,203 | - | 3,352 | 3,925 | 157 | 6,611 | 3,120 | 263 |
| NATIONAL AGRICULTURAL LIBRARY..... | 263 | - | - | - | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 488 | - | - | - | - | 215 | - | 273 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 143,772 | 38,974 | 1,466 | 20,398 | 35,642 | 2,098 | 32,589 | 9,465 | 3,140 |
| BUREAU OF THE CENSUS..... | 1,904 | - | 613 | - | - | 347 | - | 944 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,591 | - | - | - | - | - | - | 1,591 | - |
| MARITIME ADMINISTRATION..... | 14,445 | - | - | - | - | - | 13,895 | 550 | - |
| NATIONAL BUREAU OF STANDARDS..... | 30,480 | - | - | 17,233 | - | 1,034 | 10,571 | - | 1,642 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 85,374 | 38,974 | 853 | 2,222 | 35,642 | - | 4,783 | 1,872 | 1,028 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,508 | - | - | - | - | - | - | 4,508 | - |
| OFFICE OF TELECOMMUNICATIONS..... | 5,000 | - | - | 943 | - | 717 | 3,340 | - | - |
| PATENT OFFICE..... | 470 | - | - | - | - | - | - | - | 470 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,633,562 | 99,801 | 35,703 | 214,086 | 133,415 | 63,470 | 1,021,720 | 8,110 | 57,257 |
| DEPARTMENT OF THE ARMY..... | 280,428 | 46,019 | 10,142 | 55,479 | 14,052 | 5,044 | 130,952 | 6,230 | 12,510 |
| DEPARTMENT OF THE NAVY..... | 292,000 | 19,045 | 7,160 | 66,622 | 48,295 | 31,031 | 119,847 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 698,000 | 29,509 | 13,348 | 26,451 | 27,894 | 6,141 | 594,354 | 303 | - |
| DEFENSE AGENCIES..... | 359,434 | 4,739 | 4,749 | 64,910 | 43,174 | 20,886 | 175,642 | 1,110 | 44,224 |
| DEPARTMENT-WIDE FUNDS..... | 3,700 | 489 | 504 | 624 | - | 368 | 925 | 467 | 523 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,489,758 | 1,174,816 | 74,336 | 60,305 | 872 | 11,191 | 31,049 | 116,866 | 20,323 |
| FOOD AND DRUG ADMINISTRATION..... | 33,916 | 21,909 | - | 12,007 | - | - | - | 33,517 | 1,924 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 188,491 | 112,943 | 38,678 | 996 | - | 389 | 44 | 1,478 | 18,399 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,154,422 | 1,021,764 | 22,900 | 47,302 | 872 | 10,802 | 30,905 | 2,000 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 3,500 | 1,000 | 500 | - | - | - | - | 53,375 | - |
| OFFICE OF EDUCATION..... | 63,213 | - | 9,838 | - | - | - | 100 | 12,210 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 31,930 | 17,200 | 2,420 | - | - | - | - | 14,286 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 14,286 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 12,740 | - | - | - | - | - | 12,740 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 144,366 | 24,415 | 68 | 16,739 | 52,175 | 1,974 | 46,942 | 1,810 | 243 |
| BONNEVILLE POWER ADMINISTRATION..... | 495 | - | - | - | - | 20 | 431 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 793 | 735 | - | - | - | - | - | 58 | - |
| BUREAU OF MINES..... | 39,541 | - | - | 10,256 | 828 | 506 | 27,951 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 76 | - | - | - | - | - | - | 76 | - |
| BUREAU OF RECLAMATION..... | 9,523 | 7 | - | - | 6,700 | - | 2,736 | 80 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 21,158 | 21,158 | - | - | 41,789 | 1,042 | 1,460 | - | - |
| GEOLOGICAL SURVEY..... | 48,530 | - | - | 4,239 | - | - | 4,059 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,059 | - | - | - | - | - | 3,775 | - | - |
| OFFICE OF SALINE WATER..... | 5,475 | - | - | 1,700 | - | - | 1,053 | - | - |
| OFFICE OF THE SECRETARY..... | 1,193 | - | - | - | 140 | - | 5,477 | 1,596 | 243 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 13,523 | 2,515 | 68 | 500 | 2,718 | 406 | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 15,162 | 1,399 | 2,115 | 2,864 | - | 1,648 | 1,990 | 5,146 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 2,162 | 1,399 | - | 254 | - | 38 | - | 471 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 13,000 | - | 2,115 | 2,610 | - | 1,610 | 1,990 | 4,675 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 12,642 | - | - | - | - | - | - | 12,642 | - |
| BUREAU OF LABOR STATISTICS..... | 2,617 | - | - | - | - | - | - | 2,617 | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 812 | - | - | - | - | - | - | 812 | - |
| MANPOWER ADMINISTRATION..... | 6,680 | - | - | - | - | - | - | 6,680 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,533 | - | - | - | - | - | - | 2,533 | - |

CONTINUED ON NEXT PAGE

TABLE C-16. FEDERAL OBLIGATIONS FOR RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|-----------|---------------|------------|-------------------|------------------------|-------------|-------------|-----------------|--------------------|
| POSTAL SERVICE..... | 5,860 | - | - | - | - | - | - | - | 5,860 |
| DEPARTMENT OF STATE, TOTAL..... | 28,204 | 19,219 | - | - | 200 | - | 1,705 | 7,080 | - |
| DEPARTMENTAL FUNDS..... | 650 | - | - | - | - | - | - | 650 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 27,554 | 19,219 | - | - | 200 | - | 1,705 | 6,430 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 183,949 | 4,805 | 5,250 | 825 | 19,788 | 2,247 | 133,579 | 17,455 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 60,371 | 1,805 | 480 | - | 3,000 | 500 | 54,586 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 32,148 | - | - | - | - | - | 30,448 | 1,700 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 10,500 | 500 | 250 | - | - | - | 5,765 | 3,985 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 22,950 | 2,500 | 4,500 | - | - | 1,300 | 14,650 | - | - |
| OFFICE OF THE SECRETARY..... | 31,000 | - | - | - | 675 | - | 20,750 | 9,575 | - |
| UNITED STATES COAST GUARD..... | 20,568 | - | - | 825 | 15,013 | - | 4,730 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 6,412 | - | 20 | - | 1,100 | 447 | 2,650 | 2,195 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 390 | - | - | 372 | - | - | 18 | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 390 | - | - | 372 | - | - | 18 | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS..... | 487 | - | - | - | - | - | - | 487 | - |
| ATOMIC ENERGY COMMISSION..... | 411,384 | 79,294 | - | 281,858 | 9,580 | 4,800 | 35,852 | - | - |
| CIVIL AERONAUTICS BOARD..... | 331 | - | - | - | - | - | - | 331 | - |
| CIVIL SERVICE COMMISSION..... | 350 | - | 350 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 78,730 | 27,890 | 7 | 10,723 | 6,914 | 347 | 32,041 | 808 | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 869 | - | - | - | - | - | 869 | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 497 | - | - | - | - | - | - | 497 | - |
| FEDERAL TRADE COMMISSION..... | 460 | - | - | - | - | - | - | 460 | - |
| GENERAL SERVICES ADMINISTRATION..... | 20 | - | - | - | - | - | - | - | 20 |
| LIBRARY OF CONGRESS..... | 1,175 | - | - | - | - | - | - | - | 1,175 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 1,561,917 | 125,326 | 2,792 | 330,376 | 349,877 | 2,000 | 751,550 | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 470,036 | 87,528 | 13,783 | 101,871 | 87,424 | 21,210 | 56,665 | 41,399 | 60,156 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 42,600 | 900 | - | - | - | - | - | 41,700 | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 535 | - | - | - | - | - | - | - | 535 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 1,080 | 330 | 12 | 277 | 96 | 21 | 324 | 20 | - |
| SMALL BUSINESS ADMINISTRATION..... | 205 | - | - | - | - | - | - | 205 | - |
| SMITHSONIAN INSTITUTION..... | 27,247 | 13,928 | - | 4,560 | 700 | - | - | 8,059 | - |
| TENNESSEE VALLEY AUTHORITY..... | 8,197 | 2,051 | - | 1,075 | - | - | 4,685 | 386 | - |
| US ARMS CONTROL & DISARMAMENT AGENCY..... | 2,420 | - | - | 157 | 44 | - | 1,397 | 634 | 188 |
| UNITED STATES INFORMATION AGENCY..... | 150 | - | - | - | - | - | 150 | - | - |
| VETERANS ADMINISTRATION..... | 61,019 | 55,154 | 4,500 | 750 | - | 60 | 370 | 185 | - |

TABLE C-17. FEDERAL OBLIGATIONS FOR RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 113,328 | 45,111 | 64,175 | 4,012 | 1,010,450 | 210,950 | 243,894 | 538,333 | 17,273 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 32 | - | 32 | - | 36,908 | - | 30,186 | 6,722 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 32 | - | 32 | - | 30,757 | - | 25,439 | 5,318 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 3,053 | - | 3,053 | - | - |
| FOREST SERVICE..... | - | - | - | - | 3,098 | - | 1,694 | 1,404 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 1,096 | 529 | 567 | - | 17,156 | 823 | 7,402 | 8,508 | 333 |
| BUREAU OF THE CENSUS..... | 567 | - | 567 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | 15,779 | 823 | 6,025 | 8,598 | 333 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 529 | 529 | - | - | 1,377 | - | 1,377 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 25,594 | 5,885 | 18,056 | 1,653 | 219,639 | 10,591 | 39,962 | 154,034 | 15,052 |
| DEPARTMENT OF THE ARMY..... | 6,942 | 3,209 | 3,276 | 457 | 64,021 | 8 | 26,837 | 30,259 | 6,857 |
| DEPARTMENT OF THE NAVY..... | 6,257 | 1,040 | 4,850 | 367 | 62,509 | 4,040 | 5,779 | 49,651 | 3,039 |
| DEPARTMENT OF THE AIR FORCE..... | 6,384 | 538 | 5,846 | - | 31,536 | 6,397 | 6,109 | 19,030 | - |
| DEFENSE AGENCIES..... | 5,728 | 1,063 | 5,836 | 829 | 60,892 | 146 | 1,157 | 54,433 | 5,156 |
| DEPARTMENT-WIDE FUNDS..... | 283 | 35 | 248 | - | 681 | - | 20 | 661 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 60,484 | 26,295 | 33,790 | 399 | 41,283 | - | 40,725 | 94 | 464 |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | 6,313 | - | 6,313 | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 33,971 | 15,727 | 18,146 | 98 | 734 | - | 734 | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 17,715 | 10,568 | 7,147 | - | 34,236 | - | 33,678 | 94 | 464 |
| OFFICE OF EDUCATION..... | 6,825 | - | 6,524 | 301 | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 1,973 | - | 1,973 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 58 | - | 58 | - | 13,952 | - | 12,148 | 1,804 | - |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | 25 | - | - | 25 | - |
| BUREAU OF MINES..... | - | - | - | - | 7,462 | - | 6,642 | 820 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 3,891 | - | 2,941 | 950 | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | 2,174 | - | 2,174 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 58 | - | 58 | - | 400 | - | 391 | 9 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,239 | - | 1,239 | - | 630 | - | - | 630 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 114 | - | 114 | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,125 | - | 1,125 | - | 630 | - | - | 630 | - |
| DEPARTMENT OF STATE, TOTAL..... | 143 | - | 143 | - | - | - | - | - | - |
| PEACE CORPS..... | 143 | - | 143 | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,701 | 395 | 2,306 | - | 32 | - | - | 32 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 395 | 395 | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. | 3,286 | - | 3,286 | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | 32 | - | - | 32 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 20 | - | 20 | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | 270 | - | 70 | 40 | 160 |

| | | | | | | | | | | | | |
|---|--------|--------|--------|-------|---------|---------|--------|---------|--------|---|---|---|
| AGRICULTURAL RESEARCH SERVICE..... | 32 | - | - | 32 | - | - | 3,053 | - | - | - | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | - | - | 1,694 | 1,404 | - | - | - | - |
| FOREST SERVICE..... | - | - | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 1,096 | 529 | 567 | 567 | - | - | 17,156 | 8,598 | 333 | - | - | - |
| BUREAU OF THE CENSUS..... | 567 | - | 567 | - | - | - | 15,779 | 8,598 | 333 | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | - | - | 1,377 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 529 | 529 | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 25,594 | 5,885 | 18,056 | 1,653 | 219,639 | 10,591 | 39,962 | 154,034 | 15,052 | - | - | - |
| DEPARTMENT OF THE ARMY..... | 6,942 | 3,209 | 3,276 | 457 | 64,021 | 8 | 26,897 | 30,259 | 6,857 | - | - | - |
| DEPARTMENT OF THE NAVY..... | 6,257 | 1,040 | 4,850 | 367 | 62,509 | 4,040 | 5,179 | 49,651 | 3,039 | - | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 6,384 | 538 | 5,846 | - | 31,536 | 6,397 | 6,109 | 19,030 | - | - | - | - |
| DEFENSE AGENCIES..... | 5,728 | 1,063 | 3,836 | 829 | 60,892 | 146 | 1,157 | 54,433 | 5,156 | - | - | - |
| DEPARTMENT-WIDE FUNDS..... | 283 | 35 | 248 | - | 681 | - | 20 | 661 | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 60,484 | 26,295 | 33,790 | 399 | 41,283 | - | 40,725 | 94 | 464 | - | - | - |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | 6,313 | - | 6,313 | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 33,971 | 15,727 | 18,146 | 98 | 734 | - | 734 | 94 | 464 | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 17,715 | 10,568 | 7,147 | 301 | 34,236 | - | 33,678 | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 6,825 | - | 6,524 | - | - | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 1,973 | - | 1,973 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 58 | - | 58 | - | 13,952 | - | 12,148 | 1,804 | - | - | - | - |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | 25 | - | - | 25 | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | 7,462 | - | 6,642 | 820 | - | - | - | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 3,891 | - | 2,941 | 950 | - | - | - | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | 2,174 | - | 2,174 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 58 | - | 58 | - | 400 | - | 391 | 9 | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,239 | - | 1,239 | - | 630 | - | - | 630 | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 114 | - | 114 | - | - | - | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,125 | - | 1,125 | - | 630 | - | - | 630 | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 143 | - | 143 | - | - | - | - | - | - | - | - | - |
| PEACE CORPS..... | 143 | - | 143 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,701 | 395 | 3,306 | - | 32 | - | - | 32 | - | - | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 395 | 395 | - | - | - | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 3,286 | - | 3,286 | - | - | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | 32 | - | - | 32 | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 20 | - | 20 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | 270 | - | 70 | 40 | 160 | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | - | - | - | - | 270 | - | 70 | 40 | 160 | - | - | - |
| OTHER AGENCIES | - | - | - | - | - | - | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION..... | - | - | - | - | 300,278 | - | 64,218 | 236,060 | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | 279 | - | 279 | - | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 8 | - | - | - | 8,430 | - | 5,421 | 2,073 | 936 | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 3,664 | 3,664 | - | - | 290,271 | 176,404 | 19,843 | 94,024 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 7,720 | 4,300 | 1,460 | 1,960 | 76,276 | 19,922 | 22,241 | 33,785 | 328 | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 5,000 | - | 5,000 | - | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 10 | 5 | 5 | - | 237 | 15 | 75 | 147 | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | 3,195 | 3,195 | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | - | - | - | - | 890 | - | 890 | - | - | - | - | - |
| U.S. ARMS CONTROL & DISARMAMENT AGENCY..... | - | - | - | - | 303 | - | 303 | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 4,300 | 4,060 | 240 | - | 700 | - | 410 | 290 | - | - | - | - |

TABLE C-18. FEDERAL OBLIGATIONS FOR RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 125,166 | 47,379 | 74,569 | 3,218 | 1,025,477 | 222,196 | 246,627 | 536,306 | 20,348 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 31 | - | 31 | - | 38,910 | - | 31,800 | 7,104 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 31 | - | 31 | - | 32,223 | - | 26,631 | 5,592 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 3,350 | - | 3,350 | - | - |
| FOREST SERVICE..... | - | - | - | - | 3,337 | - | 1,825 | 1,512 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 1,449 | 705 | 744 | - | 19,552 | 859 | 8,117 | 9,084 | 1,492 |
| BUREAU OF THE CENSUS..... | 744 | - | 744 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | 16,573 | 859 | 6,282 | 9,084 | 348 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 705 | 705 | - | - | 1,835 | - | 1,835 | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | - | - | - | - | 1,144 | - | - | - | 1,144 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 28,526 | 4,947 | 21,622 | 1,957 | 197,686 | 7,479 | 32,658 | 140,893 | 16,656 |
| DEPARTMENT OF THE ARMY..... | 5,881 | 2,241 | 3,201 | 439 | 52,258 | 140 | 19,497 | 26,528 | 6,093 |
| DEPARTMENT OF THE NAVY..... | 5,852 | 893 | 4,519 | 440 | 61,260 | 3,178 | 6,192 | 48,992 | 2,892 |
| DEPARTMENT OF THE AIR FORCE..... | 11,230 | 675 | 10,555 | - | 26,493 | 4,061 | 6,014 | 16,418 | - |
| DEFENSE AGENCIES..... | 5,271 | 1,108 | 3,085 | 1,078 | 57,075 | 100 | 949 | 48,361 | 7,665 |
| DEPARTMENTWIDE FUNDS..... | 292 | 30 | 262 | - | 600 | - | 6 | 594 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 69,178 | 27,227 | 41,020 | 931 | 52,315 | - | 51,641 | 117 | 557 |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | 9,748 | - | 9,748 | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 35,481 | 14,504 | 19,706 | 871 | 1,156 | - | 1,156 | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 20,574 | 12,323 | 8,251 | - | 41,411 | - | 40,737 | 117 | 557 |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | 500 | - | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 9,548 | - | 9,488 | 60 | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 3,075 | - | 3,075 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 62 | - | 62 | - | 13,495 | - | 11,610 | 1,885 | - |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | 27 | - | - | 27 | - |
| BUREAU OF MINES..... | - | - | - | - | 7,355 | - | 6,503 | 852 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 4,054 | - | 3,060 | 944 | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | 1,600 | - | 1,600 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 62 | - | 62 | - | 459 | - | 447 | 12 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,191 | - | 1,191 | - | 719 | - | 59 | 680 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 16 | - | 16 | - | 39 | - | 39 | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,175 | - | 1,175 | - | 680 | - | - | 680 | - |
| DEPARTMENT OF STATE, TOTAL..... | 103 | - | 103 | - | - | - | - | - | - |
| PEACE CORPS..... | 103 | - | 103 | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 2,737 | 443 | 2,294 | - | 95 | - | - | 95 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 443 | 443 | - | - | - | - | - | - | - |

| | | | | | | | | | | |
|--|--------|--------|--------|-------|---------|--------|--------|---------|--------|-------|
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 31 | - | - | 31 | - | 38,910 | - | 31,806 | 7,104 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 31 | - | - | 31 | - | 32,223 | - | 26,631 | 5,592 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | - | 3,350 | - | 3,350 | - | - |
| FOREST SERVICE..... | - | - | - | - | - | 3,337 | - | 1,825 | 1,512 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 1,449 | 705 | 744 | 744 | - | 19,552 | 859 | 8,117 | 9,084 | 1,492 |
| BUREAU OF THE CENSUS..... | 744 | - | 744 | 744 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 705 | 705 | - | - | - | 16,573 | 859 | 6,282 | 9,084 | 348 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | - | - | - | - | - | 1,835 | - | 1,835 | - | - |
| | - | - | - | - | - | 1,144 | - | - | - | 1,144 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 28,526 | 4,947 | 21,622 | 1,957 | 197,686 | 7,479 | 32,658 | 140,893 | 16,656 | 6,093 |
| DEPARTMENT OF THE ARMY..... | 5,881 | 2,241 | 3,201 | 439 | 52,258 | 140 | 19,497 | 26,528 | 48,992 | 2,898 |
| DEPARTMENT OF THE NAVY..... | 5,852 | 893 | 4,519 | 440 | 61,260 | 3,178 | 6,192 | 6,014 | 16,418 | - |
| DEPARTMENT OF THE AIR FORCE..... | 11,230 | 675 | 10,555 | - | 26,393 | 4,061 | 949 | 48,361 | 7,665 | - |
| DEFENSE AGENCIES..... | 5,271 | 1,108 | 3,085 | 1,078 | 57,075 | 100 | 6 | - | - | - |
| DEPARTMENT-WIDE FUNDS..... | 292 | 30 | 262 | - | 600 | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 69,178 | 27,227 | 41,020 | 931 | 52,315 | - | 51,641 | 117 | 557 | - |
| FOOD AND DRUG ADMINISTRATION..... | 35,481 | 14,904 | 19,706 | 871 | 9,748 | - | 9,748 | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 20,574 | 12,323 | 8,251 | - | 1,156 | - | 1,156 | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 500 | - | 500 | - | 41,411 | - | 40,737 | 117 | 557 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 9,548 | - | 9,488 | 60 | - | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 3,075 | - | 3,075 | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 62 | - | 62 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | - | - | - | - | 13,495 | - | 11,610 | 1,885 | - | - |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | 27 | - | - | 27 | - | - |
| BUREAU OF MINES..... | - | - | - | - | 7,355 | - | 6,503 | 852 | - | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 4,054 | - | 3,060 | 994 | - | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | 1,600 | - | 1,600 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 62 | - | 62 | - | 459 | - | 447 | 12 | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,191 | - | 1,191 | - | 719 | - | 39 | 680 | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 16 | - | 16 | - | 39 | - | 39 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,175 | - | 1,175 | - | 680 | - | - | 680 | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 103 | - | 103 | - | - | - | - | - | - | - |
| PEACE CORPS..... | 103 | - | 103 | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 2,737 | 443 | 2,294 | - | 95 | - | - | 95 | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 443 | 443 | - | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 215 | - | 215 | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 2,059 | - | 2,059 | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | 95 | - | - | 95 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 20 | - | 20 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | 355 | - | 90 | 50 | 215 | - |
| BUREAU OF ENGRAVING AND PRINTING..... | - | - | - | - | 255 | - | 90 | 50 | 215 | - |
| OTHER AGENCIES | 327 | 7 | 327 | - | 292,395 | - | 61,173 | 231,222 | - | - |
| ATOMIC ENERGY COMMISSION..... | 7 | 3,384 | - | - | 9,471 | - | 6,200 | 1,938 | 1,333 | - |
| CIVIL SERVICE COMMISSION..... | 3,384 | 6,420 | - | - | 313,744 | - | 17,871 | 108,828 | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 8,660 | - | 1,910 | 330 | 80,976 | - | 23,691 | 33,954 | 95 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 5,000 | 6 | 5,000 | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 11 | - | 5 | - | 253 | 17 | 80 | 156 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | - | - | - | - | 3,560 | 3,560 | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | - | - | - | - | 976 | - | 976 | - | - | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | 225 | - | 225 | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | - | - | - | - | 750 | - | 450 | 300 | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | - | - | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 4,500 | 4,240 | 260 | - | - | - | - | - | - | - |

TABLE C-19. FEDERAL OBLIGATIONS FOR RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE,
FISCAL YEAR 1972 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 140,413 | 58,390 | 79,054 | 2,969 | 1,086,483 | 198,772 | 304,348 | 568,421 | 14,942 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 31 | - | 31 | - | 39,247 | - | 32,145 | 7,102 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 31 | - | 31 | - | 32,215 | - | 26,632 | 5,583 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 3,680 | - | 3,680 | - | - |
| FOREST SERVICE..... | - | - | - | - | 3,352 | - | 1,833 | 1,519 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 1,466 | 853 | 613 | - | 20,398 | 858 | 8,822 | 10,370 | 348 |
| BUREAU OF THE CENSUS..... | 613 | - | 613 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | 17,233 | 858 | 6,600 | 9,427 | 348 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | 853 | 853 | - | - | 2,222 | - | 2,222 | 943 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 35,703 | 6,557 | 27,436 | 1,710 | 214,086 | 7,197 | 36,137 | 159,037 | 11,715 |
| DEPARTMENT OF THE ARMY..... | 10,142 | 3,899 | 5,833 | 410 | 55,479 | 11 | 23,113 | 26,165 | 6,190 |
| DEPARTMENT OF THE NAVY..... | 7,160 | 917 | 5,843 | 400 | 66,622 | 3,012 | 6,745 | 53,975 | 2,890 |
| DEPARTMENT OF THE AIR FORCE..... | 13,348 | 490 | 12,858 | - | 26,451 | 4,174 | 5,723 | 16,554 | - |
| DEFENSE AGENCIES..... | 4,749 | 1,220 | 2,629 | 900 | 64,910 | - | 550 | 61,725 | 2,635 |
| DEPARTMENT-WIDE FUNDS..... | 304 | 31 | 273 | - | 624 | - | 6 | 618 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 74,336 | 32,854 | 40,556 | 926 | 60,305 | - | 59,536 | 133 | 636 |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | 12,007 | - | 12,007 | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. NATIONAL INSTITUTES OF HEALTH..... | 38,678 | 19,214 | 18,538 | 926 | 996 | - | 996 | - | - |
| OFFICE OF CHILD DEVELOPMENT..... | 22,900 | 13,640 | 9,260 | - | 47,302 | - | 46,533 | 133 | 636 |
| OFFICE OF EDUCATION..... | 500 | - | 500 | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 9,838 | - | 9,838 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 2,420 | - | 2,420 | - | - | - | - | - | - |
| BONNEVILLE POWER ADMINISTRATION..... | 68 | - | 68 | - | 16,739 | - | 12,661 | 4,078 | - |
| BUREAU OF MINES..... | - | - | - | - | 44 | - | - | 44 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 17,256 | - | 7,279 | 2,977 | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | 4,239 | - | 3,197 | 1,042 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 68 | - | 68 | - | 1,700 | - | 1,700 | 15 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 2,115 | - | 2,115 | - | 2,864 | - | 254 | 2,610 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS LAW ENFORCEMENT ASSISTANCE ADMIN..... | - | - | - | - | 254 | - | 254 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 5,250 | 480 | 4,770 | - | 825 | - | - | 825 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 480 | 480 | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 250 | - | 250 | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. UNITED STATES COAST GUARD..... | 4,500 | - | 4,500 | - | 825 | - | - | 825 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 20 | - | 20 | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | 372 | - | 95 | 55 | 222 |
| BUREAU OF ENGRAVING AND PRINTING..... | - | - | - | - | 372 | - | 95 | 55 | 222 |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | - | - | - | - | 281,858 | - | 59,278 | 222,580 | - |

| | | | | | | | | | | | | |
|---|--------|--------|-------|--------|-------|---------|---------|---------|--------|---------|--------|-----|
| BUREAU OF THE CENSUS..... | 613 | - | - | 613 | - | - | 17,233 | - | 858 | 6,600 | 9,427 | 348 |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | - | - | 2,222 | - | - | 2,222 | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 853 | - | - | - | - | - | 943 | - | - | - | 943 | - |
| OFFICE OF TELECOMMUNICATIONS..... | - | - | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 35,703 | 6,557 | 1,710 | 27,436 | 1,710 | 214,086 | - | 7,197 | 36,137 | 159,037 | 11,715 | - |
| DEPARTMENT OF THE ARMY..... | 10,142 | 3,899 | 410 | 5,833 | 410 | 55,479 | 11 | 11 | 23,113 | 26,165 | 6,190 | - |
| DEPARTMENT OF THE NAVY..... | 7,160 | 917 | 400 | 5,843 | 400 | 66,622 | 3,012 | 3,012 | 6,745 | 53,975 | 2,890 | - |
| DEPARTMENT OF THE AIR FORCE..... | 13,348 | 490 | - | 12,858 | - | 26,451 | 4,174 | 4,174 | 5,723 | 16,554 | - | - |
| DEFENSE AGENCIES..... | 4,749 | 1,220 | 900 | 2,629 | 900 | 64,910 | - | - | 550 | 61,725 | 2,635 | - |
| DEPARTMENT-WIDE FUNDS..... | 304 | 31 | - | 273 | - | 624 | - | - | 6 | 618 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 74,336 | 32,854 | 926 | 40,556 | 926 | 60,305 | - | - | 59,536 | 133 | 636 | - |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 38,678 | 19,214 | 926 | 18,538 | 926 | 12,007 | - | - | 12,007 | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 22,900 | 13,640 | - | 9,260 | - | 47,302 | - | - | 46,533 | 133 | 636 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | - | 500 | - | - | - | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 9,838 | - | - | 9,838 | - | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 2,420 | - | - | 2,420 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 68 | - | - | 68 | - | 16,739 | - | - | 12,661 | 4,078 | - | - |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 44 | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | 10,256 | - | - | 7,279 | 2,977 | - | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | - | 4,239 | - | - | 3,197 | 1,042 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 68 | - | - | 68 | - | 1,700 | - | - | 1,700 | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 2,115 | - | - | 2,115 | - | 2,864 | - | - | 254 | 2,610 | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | - | - | - | - | - | 254 | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 2,115 | - | - | 2,115 | - | 2,610 | - | - | 254 | 2,610 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 5,250 | 480 | - | 4,770 | - | 825 | - | - | - | 825 | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 480 | 480 | - | - | - | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 250 | - | - | 250 | - | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 4,500 | - | - | 4,500 | - | 825 | - | - | - | 825 | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | - | - | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 20 | - | - | 20 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | - | 372 | - | - | 95 | 55 | 222 | - |
| BUREAU OF ENGRAVING AND PRINTING..... | - | - | - | - | - | 372 | - | - | 95 | 55 | 222 | - |
| OTHER AGENCIES | - | - | - | - | - | - | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION..... | 350 | - | - | 350 | - | 281,858 | - | - | 59,278 | 222,580 | - | - |
| CIVIL SERVICE COMMISSION..... | 7 | 7 | - | - | - | 10,723 | - | - | 7,083 | 1,952 | 1,688 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 2,792 | 2,792 | - | - | - | 330,376 | - | - | 57,691 | 115,240 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 13,783 | 10,600 | 333 | 2,850 | 333 | 101,871 | 157,445 | 157,445 | 28,877 | 43,967 | 333 | - |
| NATIONAL SCIENCE FOUNDATION..... | 12 | 7 | - | 5 | - | 277 | 28,694 | 28,694 | 87 | 172 | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | - | - | - | - | - | 4,560 | 18 | 18 | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | - | 1,075 | 4,560 | 4,560 | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | - | - | - | - | - | 157 | - | - | 1,075 | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY..... | - | - | - | - | - | 157 | - | - | 157 | - | - | - |
| VETERANS ADMINISTRATION..... | 4,500 | 4,240 | - | 260 | - | 750 | - | - | 450 | 300 | - | - |

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|--|---------------|-------------|------------------|------------------------|-------------------|------------------------|---------------|--------------|----------------|------------------------------|
| | TOTAL | BIO-LOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOS- PHERIC | GEO- LOGICAL | OCEAN- UGRAPHY | ENVIRON- MENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 1,533,432 | 684,782 | 685,633 | 144,900 | 18,117 | 586,631 | 287,737 | 188,897 | 91,222 | 18,775 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 166,681 | 163,802 | 2,762 | 117 | - | 4,839 | 1,818 | 3,020 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 98,631 | 98,514 | - | 117 | - | 859 | 211 | 648 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 41,983 | 39,221 | 2,762 | - | - | 350 | 350 | - | - | - |
| FOREST SERVICE..... | 26,067 | 26,067 | - | - | - | 3,629 | 1,257 | 2,372 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 24,157 | 24,157 | - | - | - | 22,090 | 15,109 | 4,545 | 2,436 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 24,157 | 24,157 | - | - | - | 22,090 | 15,109 | 4,545 | 2,436 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 104,003 | 37,612 | 42,296 | 23,920 | 175 | 128,253 | 47,086 | 25,663 | 42,116 | 13,389 |
| DEPARTMENT OF THE ARMY..... | 52,863 | 21,755 | 30,943 | - | 165 | 13,941 | 8,281 | 3,509 | 1,910 | 250 |
| DEPARTMENT OF THE NAVY..... | 15,595 | 5,025 | 10,560 | - | 10 | 46,895 | 6,204 | 1,346 | 39,601 | 744 |
| DEPARTMENT OF THE AIR FORCE..... | 26,707 | 2,200 | 587 | 23,920 | - | 25,800 | 23,468 | 2,332 | - | - |
| DEFENSE AGENCIES..... | 8,218 | 8,218 | - | - | - | 41,617 | 9,133 | 18,485 | 1,605 | 12,394 |
| DEPARTMENT-WIDE FUNDS..... | 620 | 414 | 206 | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 897,108 | 201,387 | 585,535 | 110,186 | - | 630 | - | - | - | 630 |
| FOOD AND DRUG ADMINISTRATION..... | 15,492 | 11,837 | 3,655 | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 99,050 | 22,621 | 76,429 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 770,946 | 166,929 | 493,831 | 110,186 | - | 630 | - | - | - | 630 |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | 500 | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 11,120 | - | 11,120 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 20,716 | 20,682 | - | - | 34 | 43,570 | 4,910 | 37,456 | 1,171 | 33 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | 31 | - | 31 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 650 | 650 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 1,821 | - | 1,760 | 61 | - |
| BUREAU OF RECLAMATION..... | 25 | 12 | - | - | 13 | 4,810 | 4,810 | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 18,041 | 18,041 | - | - | - | - | - | 33,660 | 1,088 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | 34,748 | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,000 | 1,979 | - | - | 21 | 2,160 | 100 | 2,005 | 22 | 33 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 326 | 326 | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 326 | 326 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 14,421 | 10,497 | 3,924 | - | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 14,421 | 10,497 | 3,924 | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,145 | 1,371 | 123 | - | 1,651 | 15,379 | 400 | 100 | 13,050 | 1,829 |
| FEDERAL AVIATION ADMINISTRATION..... | 1,484 | 1,361 | 123 | - | - | 400 | 400 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 1,651 | - | - | - | 1,651 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | 249 | - | - | - | 249 |
| UNITED STATES COAST GUARD..... | 10 | 10 | - | - | - | 13,244 | - | - | 13,050 | 194 |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | 1,486 | - | 100 | - | 1,386 |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 80,719 | 72,649 | 8,070 | - | - | 9,462 | 5,318 | 1,942 | 2,202 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 19,311 | 12,484 | 660 | 6,167 | - | 4,801 | 1,201 | 36 | 1,716 | 1,848 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 78,229 | 61,106 | 5,352 | - | 11,771 | 297,629 | 186,471 | 103,700 | 7,458 | - |
| NATIONAL SCIENCE FOUNDATION..... | 60,119 | 54,423 | - | 1,210 | 4,486 | 59,270 | 25,398 | 11,770 | 21,055 | 1,047 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 2,600 | - | 2,600 | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 284 | 173 | 111 | - | - | 83 | 26 | 39 | 18 | - |
| SMITHSONIAN INSTITUTION..... | 7,709 | 7,709 | - | - | - | 586 | - | 586 | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 1,727 | 1,727 | - | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | - | - | - | - | - | 40 | - | 40 | - | - |
| VETERANS ADMINISTRATION..... | 52,177 | 14,677 | 34,200 | 3,300 | - | - | - | - | - | - |

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|--|---------------|-------------|------------------|------------------------|-------------------|------------------------|--------------|-------------|--------------|-----------------------------|
| | TOTAL | BIO-LOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOS-PHERIC | GEO-LOGICAL | OCEAN-OGRAHY | ENVIRON-MENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 1,735,136 | 735,295 | 804,177 | 168,361 | 27,303 | 632,124 | 311,193 | 193,223 | 97,290 | 30,418 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 180,306 | 177,132 | 3,031 | 143 | - | 5,196 | 1,950 | 3,246 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 106,391 | 106,248 | - | 143 | - | 911 | 222 | 689 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 46,087 | 43,056 | 3,031 | - | - | 371 | 371 | - | - | - |
| FOREST SERVICE..... | 27,828 | 27,828 | - | - | - | 3,914 | 1,357 | 2,557 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 32,204 | 32,204 | - | - | - | 29,450 | 20,143 | 6,060 | 3,247 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 32,204 | 32,204 | - | - | - | 29,450 | 20,143 | 6,060 | 3,247 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 93,210 | 32,185 | 36,440 | 24,261 | 324 | 132,557 | 45,345 | 27,423 | 40,271 | 19,518 |
| DEPARTMENT OF THE ARMY..... | 45,022 | 19,796 | 25,102 | - | 124 | 13,214 | 7,464 | 3,225 | 2,350 | 175 |
| DEPARTMENT OF THE NAVY..... | 16,143 | 5,513 | 10,630 | - | - | 44,681 | 6,163 | 1,446 | 36,407 | 665 |
| DEPARTMENT OF THE AIR FORCE..... | 26,501 | 1,700 | 540 | 24,261 | - | 27,188 | 24,462 | 2,726 | - | - |
| DEFENSE AGENCIES..... | 5,074 | 4,874 | - | - | 200 | 47,474 | 7,256 | 20,026 | 1,514 | 18,678 |
| DEPARTMENT-WIDE FUNDS..... | 470 | 302 | 168 | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,060,505 | 227,390 | 700,129 | 132,986 | - | 763 | - | - | - | 763 |
| FOOD AND DRUG ADMINISTRATION..... | 16,174 | 16,174 | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 117,063 | 22,275 | 94,788 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 913,938 | 188,941 | 592,011 | 132,986 | - | 763 | - | - | - | 763 |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | 500 | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 12,830 | - | 12,830 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 23,159 | 23,129 | - | - | 30 | 48,361 | 6,640 | 40,615 | 1,069 | 37 |
| BCNNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | 46 | - | 46 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 698 | 698 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 2,540 | - | 2,521 | 19 | - |
| BUREAU OF RECLAMATION..... | 22 | 12 | - | - | 10 | 6,525 | 6,525 | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 20,132 | 20,132 | - | - | - | 36,757 | - | 35,729 | 1,028 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 2,307 | 2,287 | - | - | 20 | 2,493 | 115 | 2,319 | 22 | 37 |
| OFFICE OF WATER RESOURCES RESEARCH..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 778 | 778 | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 778 | 778 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 18,731 | 11,908 | 6,823 | - | - | 60 | - | 60 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 18,731 | 11,908 | 6,823 | - | - | 60 | - | 60 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,127 | 1,517 | 150 | 310 | 1,150 | 15,742 | 768 | 100 | 14,127 | 747 |
| FEDERAL AVIATION ADMINISTRATION..... | 1,667 | 1,517 | 150 | 310 | - | 768 | 768 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 310 | - | - | - | 1,150 | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 1,150 | - | - | - | - | 694 | - | - | - | 694 |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | 14,180 | - | - | 14,127 | 53 |
| UNITED STATES COAST GUARD..... | - | - | - | - | - | 100 | - | 100 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 79,652 | 71,552 | 8,100 | 6,361 | - | 9,298 | 5,160 | 1,995 | 2,143 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 21,674 | 14,757 | 556 | - | - | 5,609 | 1,095 | 30 | 2,434 | 2,050 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 77,898 | 52,737 | 5,946 | 1,000 | 19,215 | 314,388 | 204,783 | 100,008 | 9,597 | - |
| NATIONAL SCIENCE FOUNDATION..... | 71,290 | 63,706 | 6,900 | - | 6,584 | 69,915 | 25,281 | 12,947 | 24,384 | 7,303 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 6,900 | - | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 303 | 185 | 118 | - | - | 88 | 28 | 42 | 18 | - |
| SMITHSONIAN INSTITUTION..... | 8,606 | 8,606 | - | - | - | 651 | - | 651 | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 1,949 | 1,949 | - | - | - | 46 | - | 46 | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | - | - | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 54,844 | 15,560 | 35,984 | 3,300 | - | - | - | - | - | - |

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|--|---------------|-------------|------------------|------------------------|-------------------|------------------------|--------------|-------------|--------------|-----------------------------|
| | TOTAL | BIO-LOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOS-PHERIC | GEO-LOGICAL | OCEAN-OGRAHY | ENVIRON-MENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 1,945,097 | 850,875 | 874,284 | 193,169 | 26,769 | 701,988 | 340,301 | 216,329 | 112,148 | 33,210 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 189,267 | 185,697 | 3,330 | 240 | - | 5,265 | 2,013 | 3,252 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 110,455 | 110,215 | - | 240 | - | 912 | 224 | 688 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 50,609 | 47,279 | 3,330 | - | - | 428 | 428 | - | - | - |
| FOREST SERVICE..... | 28,203 | 28,203 | - | - | - | 3,925 | 1,361 | 2,564 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 38,974 | 38,974 | - | - | - | 35,642 | 24,378 | 7,334 | 3,930 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 38,974 | 38,974 | - | - | - | 35,642 | 24,378 | 7,334 | 3,930 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 99,801 | 31,884 | 39,999 | 27,818 | 100 | 133,415 | 47,038 | 27,321 | 42,756 | 16,300 |
| DEPARTMENT OF THE ARMY..... | 46,019 | 19,319 | 26,600 | - | 100 | 14,052 | 7,917 | 3,350 | 2,585 | 200 |
| DEPARTMENT OF THE NAVY..... | 19,045 | 5,821 | 13,224 | - | - | 48,295 | 7,411 | 1,632 | 38,591 | 661 |
| DEPARTMENT OF THE AIR FORCE..... | 29,509 | 1,691 | - | 27,818 | - | 27,894 | 25,190 | 2,704 | - | - |
| DEFENSE AGENCIES..... | 4,739 | 4,739 | - | - | - | 43,174 | 6,520 | 19,635 | 1,580 | 15,439 |
| DEPARTMENT-WIDE FUNDS..... | 489 | 314 | 175 | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,174,816 | 254,904 | 775,786 | 144,126 | - | 872 | - | - | - | 872 |
| FOOD AND DRUG ADMINISTRATION..... | 21,909 | 21,909 | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 112,943 | 26,869 | 86,074 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 1,021,764 | 206,126 | 671,512 | 144,126 | - | 872 | - | - | - | 872 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | - | 1,000 | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 17,200 | - | 17,200 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 24,415 | 24,383 | - | - | 32 | 52,175 | 6,832 | 43,952 | 1,345 | 46 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 735 | 735 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 7 | 2 | - | - | 5 | 828 | 6,700 | 828 | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 21,158 | 21,158 | - | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | 41,789 | - | 40,614 | 1,175 | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | 140 | - | - | 140 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,515 | 2,488 | - | - | 27 | 2,718 | 132 | 2,510 | 30 | 46 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,399 | 1,399 | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 1,399 | 1,399 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 19,219 | 12,192 | 7,027 | - | - | 200 | - | 200 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 19,219 | 12,192 | 7,027 | - | - | 200 | - | 200 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 4,805 | 1,649 | 156 | 500 | 2,500 | 19,788 | 3,000 | 100 | 14,913 | 1,775 |
| FEDERAL AVIATION ADMINISTRATION..... | 1,805 | 1,649 | 156 | - | - | 3,000 | 3,000 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 500 | - | - | 500 | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 2,500 | - | - | - | 2,500 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | 675 | - | - | - | 675 |
| UNITED STATES COAST GUARD..... | - | - | - | - | - | 15,013 | - | - | 14,913 | 100 |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | 1,100 | - | 100 | - | 1,000 |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 79,294 | 71,384 | 7,910 | - | - | 9,580 | 5,520 | 1,800 | 2,260 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 27,890 | 17,140 | 539 | 10,211 | - | 6,914 | 1,091 | 29 | 3,077 | 2,717 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 125,326 | 98,356 | 2,209 | 6,974 | 17,787 | 349,873 | 221,649 | 118,713 | 9,511 | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 87,528 | 81,178 | - | - | 6,350 | 87,424 | 28,750 | 12,839 | 34,335 | 11,500 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 900 | - | 900 | - | - | - | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | 330 | 201 | 129 | - | - | 96 | 30 | 45 | 21 | - |
| TENNESSEE VALLEY AUTHORITY..... | 13,928 | 13,928 | - | - | - | 700 | - | 700 | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 2,051 | 2,051 | - | - | - | 44 | - | 44 | - | - |
| VETERANS ADMINISTRATION..... | 55,154 | 15,555 | 36,299 | 3,300 | - | - | - | - | - | - |

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AERO-NAUTICAL | ASTRO-NAUTICAL | CHEMICAL | CIVIL | ELECTRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGINEERING AND MECHANICAL |
|---|-----------|---------------|----------------|----------|--------|------------|------------|--------------------------|----------------------------|
| TOTAL, ALL AGENCIES..... | 1,967,739 | 466,464 | 289,525 | 117,224 | 60,771 | 354,351 | 140,011 | 251,569 | 387,844 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 28,909 | - | - | 4,200 | 3,312 | 87 | 1,454 | - | 19,856 |
| AGRICULTURAL RESEARCH SERVICE..... | 20,707 | - | - | 3,781 | 2,472 | 87 | 761 | - | 13,606 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 2,092 | - | - | - | - | - | - | - | 2,092 |
| FOREST SERVICE..... | 6,110 | - | - | 419 | 840 | - | 693 | - | 4,158 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 15,689 | 125 | - | 956 | 4,064 | 4,919 | 1,080 | 1,928 | 2,617 |
| MARITIME ADMINISTRATION..... | 3,268 | - | - | - | 2,729 | 71 | - | - | 468 |
| NATIONAL BUREAU OF STANDARDS..... | 9,456 | 125 | - | - | 1,335 | 3,579 | 340 | 1,928 | 2,145 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 2,965 | - | - | 956 | - | 1,267 | 740 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 972,775 | 163,371 | 108,058 | 36,511 | 15,714 | 261,417 | 69,257 | 71,359 | 247,095 |
| DEPARTMENT OF THE ARMY..... | 129,057 | 16,797 | 10 | 18,203 | 8,865 | 38,997 | 14,199 | 15,360 | 16,626 |
| DEPARTMENT OF THE NAVY..... | 112,640 | 12,378 | 856 | 10,990 | 3,107 | 35,356 | 25,228 | 19,030 | 5,700 |
| DEPARTMENT OF THE AIR FORCE..... | 568,265 | 125,601 | 97,759 | 5,563 | 1,570 | 138,045 | 24,068 | 27,139 | 148,520 |
| DEFENSE AGENCIES..... | 161,760 | 8,595 | 9,433 | 1,755 | 1,617 | 48,920 | 5,571 | 9,830 | 76,039 |
| DEPARTMENT-WIDE FUNDS..... | 1,053 | - | - | - | 560 | 99 | 184 | - | 213 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 22,667 | - | - | - | - | 148 | - | 31 | 22,488 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 87 | - | - | - | - | 87 | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 22,435 | - | - | - | - | 61 | - | 31 | 22,343 |
| SOCIAL AND REHABILITATION SERVICE..... | 145 | - | - | - | - | - | - | - | 145 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP..... | 7,097 | - | - | - | 6,387 | 213 | 213 | 284 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 39,892 | - | - | 14,315 | 5,595 | 2,428 | 1,577 | 14,464 | 1,513 |
| BUREAU OF LAND MANAGEMENT..... | 448 | - | - | - | - | 448 | - | - | - |
| BUREAU OF MINES..... | 24,040 | - | - | 8,013 | 24 | 823 | 736 | 14,444 | - |
| BUREAU OF RECLAMATION..... | 2,294 | - | - | - | 2,108 | 186 | - | - | - |
| GEOLOGICAL SURVEY..... | 1,374 | - | - | - | 1,174 | - | 200 | - | - |
| OFFICE OF COAL RESEARCH..... | 2,341 | - | - | 1,000 | - | 831 | 440 | - | 10 |
| OFFICE OF SALINE WATER..... | 5,001 | - | - | 5,001 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 4,394 | - | - | 301 | 2,289 | 80 | 201 | 20 | 1,503 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 363 | - | - | - | - | 363 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 363 | - | - | - | - | 363 | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,392 | - | - | - | 1,190 | - | 202 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 1,392 | - | - | - | 1,190 | - | 202 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 51,313 | 2,635 | - | 1,782 | 11,081 | 2,523 | 11,979 | 6,914 | 14,399 |
| FEDERAL AVIATION ADMINISTRATION..... | 7,331 | 1,915 | - | - | 180 | - | - | - | 5,236 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 27,177 | - | - | 1,388 | 8,357 | 1,401 | 2,716 | 6,374 | 6,941 |
| FEDERAL RAILROAD ADMINISTRATION..... | 4,020 | 720 | - | - | 1,093 | 1,007 | 700 | 500 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 8,293 | - | - | - | - | - | 8,293 | - | - |
| OFFICE OF THE SECRETARY..... | 1,902 | - | - | - | - | - | - | - | 1,902 |
| UNITED STATES COAST GUARD..... | 595 | - | - | 394 | 201 | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,995 | - | - | - | 1,250 | 115 | 270 | 40 | 320 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 16 | - | - | - | - | - | - | 16 | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 16 | - | - | - | - | - | - | 16 | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 36,879 | - | - | 4,589 | - | - | - | 30,986 | 1,304 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 19,718 | - | 219 | 6,747 | 7,870 | 197 | 4,685 | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1,015 | - | - | - | - | 1,015 | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | 194 | - | - | - | 194 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 736,359 | 299,772 | 181,207 | 42,145 | 159 | 74,331 | 44,233 | 22,458 | 72,054 |
| NATIONAL SCIENCE FOUNDATION..... | 25,927 | 520 | - | 4,640 | 3,116 | 5,983 | 5,299 | 3,070 | 3,299 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 531 | - | - | - | - | 531 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 279 | 41 | 41 | 41 | 39 | 39 | 39 | 39 | - |
| TENNESSEE VALLEY AUTHORITY..... | 3,406 | - | - | 1,298 | 2,050 | - | - | - | 58 |
| US ARMS CONTROL & DISARMAMENT AGENCY..... | 2,811 | - | - | - | - | - | - | - | 2,811 |

TABLE C-24. FEDERAL OBLIGATIONS FOR RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AE NAUTICAL | ASTRO-NAUTICAL | CHEMICAL | CIVIL | ELECTRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGINEERING NEC |
|--|-----------|-------------|----------------|----------|--------|------------|------------|--------------------------|-----------------|
| TOTAL, ALL AGENCIES..... | 2,013,906 | 473,635 | 287,850 | 113,299 | 80,425 | 356,340 | 145,327 | 154,734 | 402,296 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 31,137 | - | - | 4,374 | 3,525 | 56 | 1,576 | - | 21,606 |
| AGRICULTURAL RESEARCH SERVICE..... | 22,246 | - | - | 3,922 | 2,622 | 56 | 828 | - | 14,818 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 2,295 | - | - | - | - | - | - | - | 2,295 |
| FOREST SERVICE..... | 6,596 | - | - | 452 | 903 | - | 748 | - | 4,493 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 30,817 | 130 | - | 1,275 | 12,599 | 9,031 | 2,924 | 2,013 | 2,845 |
| MARITIME ADMINISTRATION..... | 15,905 | - | - | - | 11,175 | 2,544 | 1,584 | - | 602 |
| NATIONAL BUREAU OF STANDARDS..... | 9,901 | 130 | - | - | 1,424 | 3,736 | 355 | 2,013 | 2,243 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 3,951 | - | - | 1,275 | - | 1,691 | 985 | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 1,060 | - | - | - | - | 1,060 | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 922,162 | 142,247 | 95,448 | 33,931 | 17,928 | 256,381 | 63,572 | 73,016 | 238,739 |
| DEPARTMENT OF THE ARMY..... | 118,351 | 17,751 | - | 13,027 | 8,053 | 34,021 | 12,506 | 14,923 | 18,070 |
| DEPARTMENT OF THE NAVY..... | 111,774 | 11,910 | 1,233 | 12,417 | 3,975 | 35,417 | 21,867 | 19,973 | 4,982 |
| DEPARTMENT OF THE AIR FORCE..... | 546,077 | 105,105 | 90,016 | 6,577 | 3,520 | 145,414 | 26,195 | 28,053 | 141,197 |
| DEFENSE AGENCIES..... | 145,071 | 7,481 | 4,199 | 1,910 | 1,866 | 41,470 | 2,898 | 10,967 | 74,280 |
| DEPARTMENT-WIDE FUNDS..... | 389 | - | - | - | 514 | 59 | 106 | - | 210 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 27,294 | - | - | - | - | 138 | - | 36 | 27,120 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 66 | - | - | - | - | 66 | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 27,078 | - | - | - | - | 72 | - | 36 | 26,970 |
| SOCIAL AND REHABILITATION SERVICE..... | 150 | - | - | - | - | - | - | - | 150 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 11,862 | - | - | - | 10,676 | 356 | 356 | 474 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 45,405 | - | - | 13,045 | 6,059 | 3,326 | 2,547 | 17,796 | 2,632 |
| BONNEVILLE POWER ADMINISTRATION..... | 381 | - | - | - | - | 381 | - | - | - |
| BUREAU OF MINES..... | 27,411 | - | - | 8,100 | 24 | 1,334 | 1,126 | 16,827 | - |
| BUREAU OF RECLAMATION..... | 2,406 | - | - | - | 2,215 | 191 | - | - | - |
| GEOLOGICAL SURVEY..... | 1,391 | - | - | - | 1,191 | - | 200 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,809 | - | - | 1,209 | - | 750 | 1,000 | 950 | 900 |
| OFFICE OF SALINE WATER..... | 3,400 | - | - | 3,400 | - | - | - | - | - |
| OFFICE OF THE SEC. ETARY..... | 583 | - | - | - | - | 583 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 5,024 | - | - | 336 | 2,629 | 87 | 221 | 19 | 1,732 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 363 | - | - | - | - | 363 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 363 | - | - | - | - | 363 | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,210 | - | - | - | 1,021 | - | 189 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 1,210 | - | - | - | 1,021 | - | 189 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 75,640 | 2,415 | - | 1,444 | 13,242 | 2,113 | 15,075 | 6,324 | 35,021 |
| FEDERAL AVIATION ADMINISTRATION..... | 19,640 | 2,415 | - | - | 250 | - | - | - | 16,975 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 26,012 | - | - | 1,324 | 7,982 | 1,338 | 2,601 | 6,134 | 6,633 |
| FEDERAL RAILROAD ADMINISTRATION..... | 5,986 | - | - | - | 2,601 | 710 | 2,295 | 150 | 230 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 8,940 | - | - | - | - | - | 8,940 | - | - |

| | | | | | | | | | |
|--|---------|---------|---------|--------|--------|---------|--------|--------|---------|
| MARITIME ADMINISTRATION..... | 15,905 | - | - | - | 11,175 | 2,544 | 1,587 | - | 602 |
| NATIONAL BUREAU OF STANDARDS..... | 9,901 | 130 | - | - | 1,424 | 3,730 | 255 | 2,013 | 2,243 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | 3,951 | - | - | - | - | 1,691 | 985 | - | - |
| | 1,060 | - | - | - | - | 1,060 | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 922,162 | 142,247 | 95,448 | 33,931 | 17,928 | 256,381 | 63,572 | 73,916 | 238,739 |
| DEPARTMENT OF THE ARMY..... | 118,351 | 17,751 | - | 13,027 | 8,053 | 34,021 | 12,506 | 14,923 | 18,070 |
| DEPARTMENT OF THE NAVY..... | 111,774 | 11,910 | 1,233 | 12,417 | 3,975 | 35,417 | 21,867 | 19,973 | 4,982 |
| DEPARTMENT OF THE AIR FORCE..... | 546,077 | 105,105 | 90,016 | 6,577 | 3,520 | 145,414 | 26,195 | 28,053 | 141,197 |
| DEFENSE AGENCIES..... | 145,071 | 7,481 | 4,199 | 1,910 | 1,866 | 41,470 | 2,898 | 10,967 | 74,280 |
| DEPARTMENT-WIDE FUNDS..... | 889 | - | - | - | 514 | 59 | 106 | - | 210 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 27,294 | - | - | - | - | 138 | - | 36 | 27,120 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. NATIONAL INSTITUTES OF HEALTH..... | 66 | - | - | - | - | 66 | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 27,078 | - | - | - | - | 72 | - | 36 | 26,970 |
| | 150 | - | - | - | - | - | - | - | 150 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP. DEPARTMENT OF THE INTERIOR, TOTAL..... | 11,862 | - | - | - | - | 356 | 356 | 474 | - |
| | 45,405 | - | - | 13,045 | 6,059 | 3,326 | 2,547 | 17,796 | 2,632 |
| BONNEVILLE POWER ADMINISTRATION..... | 381 | - | - | - | - | 381 | - | - | - |
| BUREAU OF MINES..... | 27,411 | - | - | 8,100 | 24 | 1,334 | 1,126 | 16,827 | - |
| BUREAU OF RECLAMATION..... | 2,406 | - | - | - | 2,215 | 191 | - | - | - |
| GEOLOGICAL SURVEY..... | 1,391 | - | - | - | 1,191 | - | 200 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,809 | - | - | 1,209 | - | 750 | 1,000 | 950 | 900 |
| OFFICE OF SALINE WATER..... | 3,400 | - | - | 3,400 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 583 | - | - | - | - | 583 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 5,024 | - | - | 336 | 2,629 | 87 | 221 | 19 | 1,732 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 363 | - | - | - | - | 363 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 363 | - | - | - | - | 363 | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,210 | - | - | - | - | - | 189 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 1,210 | - | - | - | - | - | 189 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 75,640 | 2,415 | - | 1,444 | 13,242 | 2,113 | 15,075 | 6,324 | 35,027 |
| FEDERAL AVIATION ADMINISTRATION..... | 19,640 | 2,415 | - | - | 25 | - | - | - | 16,975 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 26,012 | - | - | 1,324 | 7,982 | 1,338 | 2,601 | 6,134 | 6,633 |
| FEDERAL RAILROAD ADMINISTRATION..... | 5,986 | - | - | - | 2,601 | 710 | 2,295 | 150 | 230 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. OFFICE OF THE SECRETARY..... | 8,947 | - | - | - | - | - | 8,940 | - | 10,000 |
| UNITED STATES COAST GUARD..... | 10,000 | - | - | 120 | 1,536 | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,656 | - | - | - | 873 | 65 | 1,239 | 40 | 1,189 |
| | 3,406 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 18 | - | - | - | - | - | - | 18 | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 18 | - | - | - | - | - | - | 18 | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 36,700 | - | - | 4,665 | - | - | - | 30,950 | 1,085 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 23,781 | - | 196 | 8,332 | 9,978 | 166 | 5,109 | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 638 | - | - | - | - | 638 | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | 63 | - | - | - | 63 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN. NATIONAL SCIENCE FOUNDATION..... | 766,759 | 327,130 | 192,163 | 39,892 | 2,940 | 73,766 | 48,241 | 21,178 | 64,389 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 33,290 | 1,670 | - | 4,940 | - | 9,804 | 5,198 | 1,987 | 6,751 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 498 | 43 | 43 | - | - | - | 42 | 42 | - |
| TENNESSEE VALLEY AUTHORITY..... | 297 | - | - | 43 | 42 | 42 | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY..... | 4,125 | - | - | 1,358 | 2,352 | - | - | - | 415 |
| UNITED STATES INFORMATION AGENCY..... | 1,317 | - | - | - | - | - | - | - | 1,317 |
| VETERANS ADMINISTRATION..... | 160 | - | - | - | - | 160 | - | - | - |
| | 370 | - | - | - | - | - | - | - | 370 |

TABLE C-25. FEDERAL OBLIGATIONS FOR RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AERO-NAUTICAL | ASTRO-NAUTICAL | CHEMICAL | CIVIL | ELECTRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGINEERING NEC |
|--|-----------|---------------|----------------|----------|---------|------------|------------|--------------------------|-----------------|
| TOTAL, ALL AGENCIES..... | 2,197,655 | 474,598 | 328,946 | 122,850 | 106,178 | 393,633 | 143,849 | 159,750 | 467,851 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 31,420 | - | - | 4,317 | 3,527 | 56 | 1,570 | - | 21,950 |
| AGRICULTURAL RESEARCH SERVICE..... | 22,287 | - | - | 3,864 | 2,619 | 56 | 821 | - | 14,927 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 2,522 | - | - | - | - | - | - | - | 2,522 |
| FOREST SERVICE..... | 6,611 | - | - | 453 | 908 | - | 749 | - | 4,501 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 32,589 | 130 | - | 1,543 | 14,269 | 9,120 | 1,548 | 2,012 | 3,967 |
| MARITIME ADMINISTRATION..... | 13,895 | - | - | - | 12,320 | - | - | - | 1,575 |
| NATIONAL BUREAU OF STANDARDS..... | 10,571 | 130 | - | - | 1,949 | 3,733 | 355 | 2,012 | 2,392 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 4,783 | - | - | 1,543 | - | 2,047 | 1,193 | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 3,340 | - | - | - | - | 3,340 | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,021,720 | 147,054 | 108,276 | 40,174 | 21,898 | 298,202 | 60,241 | 82,124 | 263,751 |
| DEPARTMENT OF THE ARMY..... | 130,952 | 19,555 | 90 | 16,360 | 8,483 | 41,050 | 13,174 | 15,661 | 16,579 |
| DEPARTMENT OF THE NAVY..... | 119,847 | 12,051 | 1,006 | 13,361 | 7,820 | 32,951 | 22,370 | 24,848 | 5,440 |
| DEPARTMENT OF THE AIR FORCE..... | 594,354 | 112,448 | 102,745 | 6,653 | 2,820 | 177,773 | 20,836 | 29,215 | 141,864 |
| DEFENSE AGENCIES..... | 175,642 | 3,000 | 4,435 | 3,800 | 2,240 | 46,537 | 3,750 | 12,400 | 99,650 |
| DEPARTMENT-WIDE FUNDS..... | 925 | - | - | - | 535 | 61 | 111 | - | 218 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 31,049 | - | - | - | - | 126 | - | 41 | 30,882 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 44 | - | - | - | - | 44 | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 30,905 | - | - | - | - | 82 | - | 41 | 30,782 |
| SOCIAL AND REHABILITATION SERVICE..... | 100 | - | - | - | - | - | - | - | 100 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 12,740 | - | - | - | 11,466 | 382 | 382 | 510 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 46,942 | - | 3,775 | 10,828 | 7,987 | 3,170 | 1,845 | 16,647 | 2,690 |
| BONNEVILLE POWER ADMINISTRATION..... | 431 | - | - | - | - | 431 | - | - | - |
| BUREAU OF MINES..... | 27,951 | - | - | 9,089 | 1,441 | 789 | 1,335 | 15,297 | - |
| BUREAU OF RECLAMATION..... | 2,736 | - | - | - | 2,546 | 190 | - | - | - |
| GEOLOGICAL SURVEY..... | 1,460 | - | - | - | 1,250 | - | 210 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,059 | - | - | 1,259 | - | 750 | - | 1,150 | 900 |
| OFFICE OF SALINE WATER..... | 3,775 | - | 3,775 | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 1,053 | - | - | 75 | - | 818 | - | 160 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 5,677 | - | - | 405 | 2,750 | 192 | 300 | 40 | 1,790 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,990 | - | - | - | - | 1,990 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,990 | - | - | - | - | 1,990 | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,705 | - | - | - | 1,455 | - | 250 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 1,705 | - | - | - | 1,455 | - | 250 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 133,579 | 3,500 | 200 | 1,719 | 17,404 | 2,506 | 20,964 | 7,341 | 79,945 |
| FEDERAL AVIATION ADMINISTRATION..... | 54,586 | 3,500 | - | - | 300 | - | - | - | 50,786 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 30,448 | - | - | 1,551 | 9,342 | 1,566 | 3,044 | 7,131 | 7,764 |
| FEDERAL RAILROAD ADMINISTRATION..... | 5,765 | - | - | - | 2,420 | 900 | 2,000 | 120 | 325 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 14,650 | - | - | - | - | - | 14,650 | - | - |
| OFFICE OF THE SECRETARY..... | 20,750 | - | - | - | - | - | - | - | 20,750 |
| UNITED STATES COAST GUARD..... | 4,730 | - | 200 | 168 | 4,362 | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 2,650 | - | - | - | 980 | 40 | 1,270 | 40 | 320 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 18 | - | - | - | - | - | - | 18 | - |

| | | | | | | | | | | | | |
|--|-----------|---------|---------|--------|--------|---------|---------|--------|---------|---------|---|---|
| NATIONAL BUREAU OF STANDARDS..... | 10,571 | 150 | - | - | 1,543 | - | 1,543 | 2,047 | 1,193 | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 4,783 | - | - | - | - | - | - | 3,340 | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 3,340 | - | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,021,720 | 147,054 | 108,276 | 90 | 40,174 | 21,898 | 298,202 | 60,241 | 82,124 | 263,751 | - | - |
| DEPARTMENT OF THE ARMY..... | 130,952 | 19,555 | 90 | 16,360 | 8,483 | 41,050 | 13,174 | 15,661 | 16,579 | - | - | - |
| DEPARTMENT OF THE NAVY..... | 119,847 | 12,051 | 1,006 | 13,361 | 7,820 | 32,951 | 22,370 | 24,848 | 5,440 | - | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 594,354 | 112,548 | 102,745 | 6,653 | 2,820 | 177,773 | 20,836 | 29,215 | 141,864 | - | - | - |
| DEFENSE AGENCIES..... | 175,642 | 3,000 | 4,435 | 3,800 | 2,240 | 46,367 | 3,750 | 12,400 | 99,650 | - | - | - |
| DEPARTMENT-WIDE FUNDS..... | 925 | - | - | - | - | 535 | 61 | 111 | 218 | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 31,049 | - | - | - | - | - | 126 | - | 41 | 30,882 | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 44 | - | - | - | - | - | 44 | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 30,905 | - | - | - | - | - | 82 | - | 41 | 30,782 | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 100 | - | - | - | - | - | - | - | - | 100 | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP..... | 12,740 | - | - | - | - | 11,466 | 382 | 510 | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 46,942 | - | 3,775 | 10,828 | 7,987 | 3,170 | 1,845 | 16,847 | 2,690 | - | - | - |
| BONNEVILLE POWER ADMINISTRATION..... | 431 | - | - | - | - | - | 431 | - | - | - | - | - |
| BUREAU OF MINES..... | 27,951 | - | - | 9,089 | 1,441 | 789 | 1,335 | 15,297 | - | - | - | - |
| BUREAU OF RECLAMATION..... | 2,736 | - | - | - | 2,546 | 190 | 210 | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 1,460 | - | - | - | 1,250 | 750 | - | 1,150 | 900 | - | - | - |
| OFFICE OF COAL RESEARCH..... | 4,059 | - | - | 1,259 | - | - | - | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 3,775 | - | 3,775 | - | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 1,053 | - | - | 75 | - | 818 | - | 160 | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 5,477 | - | - | 405 | 2,750 | 192 | 300 | 40 | 1,790 | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,990 | - | - | - | - | - | 1,990 | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,990 | - | - | - | - | - | 1,990 | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,705 | - | - | - | - | 1,455 | - | 250 | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 1,705 | - | - | - | - | 1,455 | - | 250 | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 133,579 | 3,500 | 200 | 1,719 | 17,404 | 2,506 | 20,964 | 7,341 | 79,945 | - | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 54,586 | 3,500 | - | - | 300 | - | - | - | 50,786 | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 30,448 | - | - | 1,551 | 9,342 | 1,566 | 3,044 | 7,181 | 7,764 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 5,765 | - | - | - | 2,420 | 900 | 2,000 | 120 | 325 | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 14,650 | - | - | - | - | - | 14,650 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 20,750 | - | - | - | - | - | - | - | 20,750 | - | - | - |
| UNITED STATES COAST GUARD..... | 4,730 | - | 200 | 168 | 4,362 | - | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 2,650 | - | - | - | 980 | 40 | 1,270 | 40 | 320 | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 18 | - | - | - | - | - | - | - | 18 | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 18 | - | - | - | - | - | - | - | 18 | - | - | - |
| OTHER AGENCIES | 35,852 | - | - | 4,627 | - | - | - | - | 30,320 | 905 | - | - |
| ATOMIC ENERGY COMMISSION..... | 32,041 | - | 193 | 11,820 | 12,244 | 161 | 7,623 | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 869 | - | - | - | - | 869 | - | - | - | - | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 751,550 | 321,276 | 216,454 | 37,455 | - | 68,646 | 43,041 | 17,633 | 46,844 | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 56,665 | 2,590 | - | 8,750 | 13,690 | 8,210 | 6,340 | 3,060 | 14,025 | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 324 | 48 | 48 | 48 | 46 | 45 | 45 | 44 | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 4,685 | - | - | 1,368 | 2,192 | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 1,397 | - | - | - | - | - | - | - | - | 1,125 | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY..... | 150 | - | - | - | - | - | - | - | - | 1,397 | - | - |
| UNITED STATES INFORMATION AGENCY..... | 370 | - | - | - | - | 150 | - | - | - | 370 | - | - |
| VETERANS ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - | - | - |

TABLE C-26. FEDERAL OBLIGATIONS FOR RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|--|---------|-------------------|-----------|---------|------------------|----------------------|-----------|---------------------------|
| TOTAL, ALL AGENCIES..... | 215,852 | 8,763 | 84,332 | 4,542 | 1,989 | 7,417 | 38,487 | 70,322 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 33,663 | - | 31,857 | 149 | - | 43 | 1,364 | 250 |
| AGRICULTURAL RESEARCH SERVICE..... | 1,150 | - | 1,043 | - | - | - | 49 | 58 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 13,574 | - | 12,855 | - | - | - | 719 | - |
| ECONOMIC RESEARCH SERVICE..... | 14,904 | - | 14,198 | 149 | - | 43 | 322 | 192 |
| FARMER COOPERATIVE SERVICE..... | 884 | - | 884 | - | - | - | - | - |
| FOREST SERVICE..... | 2,884 | - | 2,610 | - | - | - | 274 | - |
| STATISTICAL REPORTING SERVICE..... | 267 | - | 267 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 10,826 | - | 10,430 | - | - | - | 396 | - |
| BUREAU OF THE CENSUS..... | 832 | - | 436 | - | - | - | 396 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 3,809 | - | 3,809 | - | - | - | - | - |
| MARITIME ADMINISTRATION..... | 1,521 | - | 1,521 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 1,159 | - | 1,159 | - | - | - | - | - |
| OFFICE OF BUSINESS ECONOMICS..... | 3,505 | - | 3,505 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 4,693 | - | 646 | - | 111 | 2,291 | 1,153 | 492 |
| DEPARTMENT OF THE ARMY..... | 2,767 | - | 425 | - | - | 1,165 | 1,117 | 60 |
| DEPARTMENT OF THE AIR FORCE..... | 200 | - | - | - | - | 200 | - | - |
| DEFENSE AGENCIES..... | 1,400 | - | - | - | 111 | 891 | - | 398 |
| DEPARTMENT-WIDE FUNDS..... | 326 | - | 221 | - | - | 35 | 36 | 34 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 84,368 | 2,365 | 5,216 | - | 582 | 511 | 19,475 | 56,219 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 25,526 | 2,244 | 5,098 | - | - | 511 | 17,212 | 461 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,085 | 121 | 118 | - | 327 | - | 496 | 23 |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | - | - | - | - | - | 500 |
| OFFICE OF EDUCATION..... | 26,241 | - | - | - | 255 | - | - | 25,986 |
| SOCIAL AND REHABILITATION SERVICE..... | 18,647 | - | - | - | - | - | 1,767 | 16,880 |
| SOCIAL SECURITY ADMINISTRATION..... | 12,369 | - | - | - | - | - | - | 12,369 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,494 | - | 951 | 10 | - | 186 | 201 | 146 |
| BUREAU OF LAND MANAGEMENT..... | 60 | - | 60 | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 92 | - | 62 | - | - | 5 | 20 | 5 |
| BUREAU OF RECLAMATION..... | 73 | - | 73 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,269 | - | 756 | 10 | - | 181 | 181 | 141 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 2,536 | - | - | - | - | 95 | 1,087 | 1,354 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 399 | - | - | - | - | - | 399 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 2,137 | - | - | - | - | 95 | 688 | 1,354 |
| DEPARTMENT OF LABOR, TOTAL..... | 11,286 | - | 11,286 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 2,566 | - | 2,566 | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 290 | - | 290 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,214 | - | 6,214 | - | - | - | - | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,216 | - | 2,216 | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 2,939 | - | 1,532 | - | - | - | 358 | 1,049 |



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TABLE C-27. FEDERAL OBLIGATIONS FOR RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|--|---------|-------------------|-----------|---------|------------------|----------------------|-----------|---------------------------|
| TOTAL, ALL AGENCIES..... | 272,994 | 10,412 | 89,344 | 5,006 | 2,012 | 6,070 | 50,009 | 110,141 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 36,066 | - | 34,133 | 157 | - | 45 | 1,473 | 258 |
| AGRICULTURAL RESEARCH SERVICE..... | 1,145 | - | 1,040 | - | - | - | 48 | 57 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 14,896 | - | 14,107 | - | - | - | 789 | - |
| ECONOMIC RESEARCH SERVICE..... | 15,688 | - | 14,945 | 157 | - | 45 | 340 | 201 |
| FARMER COOPERATIVE SERVICE..... | 945 | - | 945 | - | - | - | - | - |
| FOREST SERVICE..... | 3,119 | - | 2,923 | - | - | - | 296 | - |
| STATISTICAL REPORTING SERVICE..... | 273 | - | 273 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 10,060 | - | 9,547 | - | - | - | 513 | - |
| BUREAU OF THE CENSUS..... | 1,074 | - | 561 | - | - | - | 513 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,844 | - | 1,844 | - | - | - | - | - |
| MARITIME ADMINISTRATION..... | 1,588 | - | 1,588 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 1,550 | - | 1,550 | - | - | - | - | - |
| OFFICE OF BUSINESS ECONOMICS..... | 4,004 | - | 4,004 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 4,552 | 140 | 728 | - | 366 | 1,415 | 1,318 | 585 |
| DEPARTMENT OF THE ARMY..... | 2,443 | 140 | 590 | - | - | 652 | 1,016 | 45 |
| DEPARTMENT OF THE AIR FORCE..... | 300 | - | - | - | - | - | - | 300 |
| DEFENSE AGENCIES..... | 1,359 | - | - | - | 366 | 753 | - | 240 |
| DEPARTMENT-WIDE FUNDS..... | 450 | - | 138 | - | - | 10 | 302 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 124,484 | 3,004 | 7,026 | - | 395 | 692 | 23,582 | 89,785 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 33,479 | 2,860 | 6,898 | - | - | 692 | 20,600 | 2,429 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,301 | 144 | 128 | - | 395 | - | 607 | 27 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | - | - | - | - | - | 500 | 500 |
| OFFICE OF EDUCATION..... | 59,052 | - | - | - | - | - | 1,875 | 59,052 |
| SOCIAL AND REHABILITATION SERVICE..... | 16,145 | - | - | - | - | - | - | 14,270 |
| SOCIAL SECURITY ADMINISTRATION..... | 13,507 | - | - | - | - | - | - | 13,507 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,719 | - | 1,061 | 15 | - | 230 | 240 | 173 |
| BUREAU OF LAND MANAGEMENT..... | 57 | - | 57 | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 133 | - | 68 | 5 | - | 20 | 30 | 10 |
| BUREAU OF RECLAMATION..... | 65 | - | 65 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,464 | - | 871 | 10 | - | 210 | 210 | 163 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 2,864 | - | - | - | - | 80 | 1,427 | 1,357 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS LAW ENFORCEMENT ASSISTANCE ADMIN..... | 727 | - | - | - | - | - | 727 | - |
| | 2,137 | - | - | - | - | 80 | 700 | 1,357 |
| DEPARTMENT OF LABOR, TOTAL..... | 12,495 | - | 12,495 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 2,615 | - | 2,615 | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 720 | - | 720 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,610 | - | 6,610 | - | - | - | - | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,550 | - | 2,550 | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 5,255 | - | 1,812 | - | - | 153 | 1,663 | 1,627 |
| DEPARTMENTAL FUNDS..... | 350 | - | - | - | - | - | - | 350 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 4,905 | - | 1,812 | - | - | 153 | 1,663 | 1,277 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 11,791 | - | 8,619 | - | - | 705 | 1,072 | 1,395 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,456 | - | 582 | - | - | - | 874 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 3,335 | - | 2,905 | - | - | 430 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 75 | - | - | - | - | 75 | - | - |
| OFFICE OF THE SECRETARY..... | 4,900 | - | 4,430 | - | - | - | - | 500 |

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TABLE C-28. FEDERAL OBLIGATIONS FOR RESEARCH IN SOCIAL SCIENCES: BY AGENCY AND DETAILED FIELD OF SCIENCE,
FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|--|---------|-------------------|-----------|---------|------------------|----------------------|-----------|---------------------------|
| TOTAL, ALL AGENCIES..... | 311,018 | 15,128 | 98,706 | 5,181 | 2,636 | 7,327 | 71,840 | 110,200 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 37,273 | - | 35,274 | 155 | - | 45 | 1,543 | 256 |
| AGRICULTURAL RESEARCH SERVICE..... | 1,146 | - | 1,041 | - | - | - | 48 | 57 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 16,363 | - | 15,497 | - | - | - | 866 | - |
| ECONOMIC RESEARCH SERVICE..... | 15,428 | - | 14,696 | 155 | - | 45 | 333 | 199 |
| FARMER COOPERATIVE SERVICE..... | 943 | - | 943 | - | - | - | - | - |
| FOREST SERVICE..... | 3,120 | - | 2,824 | - | - | - | 296 | - |
| STATISTICAL REPORTING SERVICE..... | 273 | - | 273 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 9,465 | - | 9,016 | - | - | - | 449 | - |
| BUREAU OF THE CENSUS..... | 944 | - | 495 | - | - | - | 449 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,591 | - | 1,591 | - | - | - | - | - |
| MARITIME ADMINISTRATION..... | 550 | - | 550 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 1,872 | - | 1,872 | - | - | - | - | - |
| OFFICE OF BUSINESS ECONOMICS..... | 4,508 | - | 4,508 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 8,110 | 25 | 868 | - | 420 | 1,600 | 4,544 | 653 |
| DEPARTMENT OF THE ARMY..... | 6,230 | 25 | 725 | - | 100 | 1,150 | 4,230 | - |
| DEPARTMENT OF THE AIR FORCE..... | 303 | - | - | - | - | - | - | 303 |
| DEFENSE AGENCIES..... | 1,110 | - | - | - | 320 | 440 | - | 350 |
| DEPARTMENT-WIDE FUNDS..... | 467 | - | 143 | - | - | 10 | 314 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 116,866 | 2,819 | 8,000 | - | 716 | 738 | 24,339 | 80,254 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 33,517 | 2,655 | 7,360 | - | - | 738 | 21,312 | 1,452 |
| NATIONAL INSTITUTES OF HEALTH..... | 1,478 | 164 | 140 | - | 451 | - | 692 | 31 |
| OFFICE OF CHILD DEVELOPMENT..... | 2,000 | - | 500 | - | - | - | 500 | 1,000 |
| OFFICE OF EDUCATION..... | 57,375 | - | - | - | 265 | - | - | 53,110 |
| SOCIAL AND REHABILITATION SERVICE..... | 12,210 | - | - | - | - | - | 1,835 | 10,375 |
| SOCIAL SECURITY ADMINISTRATION..... | 14,286 | - | - | - | - | - | - | 14,286 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,810 | - | 1,093 | 23 | - | 260 | 265 | 169 |
| BUREAU OF LAND MANAGEMENT..... | 58 | - | 58 | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 76 | - | 45 | 3 | - | 5 | 20 | 3 |
| BUREAU OF RECLAMATION..... | 80 | - | 80 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,596 | - | 910 | 20 | - | 255 | 245 | 166 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 5,146 | - | - | - | - | 240 | 2,206 | 2,700 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 471 | - | - | - | - | - | 471 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 4,675 | - | - | - | - | 240 | 1,735 | 2,700 |

OTHER AGENCIES

TABLE C-29. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | | FOREIGN |
|--|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|--------|---------|
| | | | EXTRAMURAL | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCA ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCA ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCA ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 2,062,256 | 658,284 | 290,137 | 29,906 | 718,355 | 267,429 | 59,924 | 3,521 | 20,078 | 14,622 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 115,709 | 85,437 | 161 | - | 25,732 | - | 429 | - | 8 | 3,942 |
| AGRICULTURAL RESEARCH SERVICE..... | 73,342 | 66,858 | 159 | - | 2,695 | - | 315 | - | - | 3,315 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 23,200 | 790 | - | - | 22,296 | - | 114 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 4,322 | 4,259 | 2 | - | 60 | - | - | - | 1 | - |
| FARMER COOPERATIVE SERVICE..... | 221 | 221 | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 14,548 | 13,264 | - | - | 650 | - | - | - | 7 | 627 |
| STATISTICAL REPORTING SERVICE..... | 76 | 45 | - | - | 31 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 39,201 | 35,876 | - | - | 1,038 | - | 403 | - | 1,008 | 876 |
| BUREAU OF THE CENSUS..... | 308 | 243 | - | - | 65 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 14,350 | 13,982 | - | - | 368 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 21,038 | 18,146 | - | - | 605 | - | 403 | - | 1,008 | 876 |
| OFFICE OF BUSINESS ECONOMICS..... | 3,505 | 3,505 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 246,670 | 95,646 | 24,854 | - | 115,383 | 319 | 7,329 | 1,565 | 22 | 1,552 |
| DEPARTMENT OF THE ARMY..... | 45,451 | 28,291 | 692 | - | 14,394 | - | 1,461 | - | 22 | 591 |
| DEPARTMENT OF THE NAVY..... | 81,944 | 30,233 | 3,483 | - | 44,869 | 84 | 3,012 | - | - | 263 |
| DEPARTMENT OF THE AIR FORCE..... | 81,000 | 36,604 | 8,792 | - | 34,329 | 25 | 552 | - | - | 698 |
| DEFENSE AGENCIES..... | 38,275 | 518 | 11,887 | - | 21,791 | 210 | 2,304 | 1,565 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 387,940 | 113,661 | 1,719 | - | 220,952 | 1,600 | 33,823 | 87 | 10,023 | 6,075 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 60,340 | 18,177 | 767 | - | 31,679 | - | 8,090 | - | 1,444 | 183 |
| NATIONAL INSTITUTES OF HEALTH..... | 319,385 | 94,783 | 952 | - | 185,933 | - | 23,159 | 87 | 8,579 | 5,892 |
| OFFICE OF EDUCATION..... | 7,812 | 298 | - | - | 3,340 | 1,600 | 2,574 | - | - | - |
| SOCIAL SECURITY ADMINISTRATION..... | 403 | 403 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 49,923 | 39,797 | 128 | - | 5,418 | - | 277 | - | 4,303 | - |
| BUREAU OF LAND MANAGEMENT..... | 15 | - | - | - | 15 | - | - | - | - | - |
| BUREAU OF MINES..... | 6,248 | 5,727 | - | - | 521 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 82 | 32 | - | - | 47 | - | - | - | 3 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 8,459 | 3,560 | - | - | 401 | - | 198 | - | 4,300 | - |
| GEOLOGICAL SURVEY..... | 30,667 | 30,324 | - | - | 343 | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 2,174 | 10 | - | - | 2,164 | - | 79 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,278 | 144 | 128 | - | 1,927 | - | - | - | - | - |
| DEPARTMENT OF LABOR, TOTAL..... | 2,052 | 1,787 | 34 | - | 85 | - | 99 | - | 47 | - |
| BUREAU OF LABOR STATISTICS..... | 1,422 | 1,422 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 290 | 290 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 340 | 75 | 34 | - | 85 | - | 99 | - | 47 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 21,099 | 12,343 | 887 | - | 2,150 | - | 1,722 | - | 3,997 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 7,390 | 1,256 | 887 | - | 650 | - | 600 | - | 3,997 | - |

| | | | | | | | | | | |
|--|---------|---------|---------|--------|---------|---------|--------|-------|--------|-------|
| AGRICULTURAL RESEARCH SERVICE..... | 73,342 | 66,858 | 159 | - | 2,695 | - | 315 | - | - | 3,315 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 23,200 | 790 | - | - | 22,296 | - | 114 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 4,322 | 4,259 | 2 | - | 60 | - | - | - | 1 | - |
| FARMER COOPERATIVE SERVICE..... | 221 | 221 | - | - | - | - | - | - | 7 | 627 |
| FOREST SERVICE..... | 14,548 | 13,264 | - | - | 650 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 76 | 45 | - | - | 31 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 39,201 | 35,876 | - | - | 1,038 | - | 403 | - | 1,008 | 876 |
| BUREAU OF THE CENSUS..... | 308 | 243 | - | - | 65 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 14,350 | 13,982 | - | - | 368 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 21,038 | 18,146 | - | - | 605 | - | 403 | - | 1,008 | 876 |
| OFFICE OF BUSINESS ECONOMICS..... | 3,505 | 3,505 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 246,670 | 95,646 | 24,854 | - | 115,383 | 319 | 7,329 | 1,565 | 22 | 1,552 |
| DEPARTMENT OF THE ARMY..... | 45,451 | 28,221 | 692 | - | 14,394 | - | 1,461 | - | 22 | 591 |
| DEPARTMENT OF THE NAVY..... | 81,944 | 30,233 | 3,483 | - | 44,869 | 84 | 3,012 | - | - | 263 |
| DEPARTMENT OF THE AIR FORCE..... | 81,000 | 36,604 | 8,792 | - | 34,329 | 25 | 552 | - | - | 698 |
| DEFENSE AGENCIES..... | 38,275 | 518 | 11,887 | - | 21,791 | 210 | 2,304 | 1,565 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 387,940 | 113,661 | 1,719 | - | 220,952 | 1,600 | 33,823 | 87 | 10,023 | 6,075 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 60,340 | 18,177 | 767 | - | 31,679 | - | 8,090 | - | 1,444 | 183 |
| NATIONAL INSTITUTES OF HEALTH..... | 319,385 | 94,783 | 952 | - | 185,933 | - | 23,159 | 87 | 8,579 | 5,892 |
| OFFICE OF EDUCATION..... | 7,812 | 298 | - | - | 3,340 | 1,600 | 2,574 | - | - | - |
| SOCIAL SECURITY ADMINISTRATION..... | 403 | 403 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 49,923 | 39,797 | 128 | - | 5,418 | - | 277 | - | 4,303 | - |
| BUREAU OF LAND MANAGEMENT..... | 15 | - | - | - | 15 | - | - | - | - | - |
| BUREAU OF MINES..... | 6,248 | 5,727 | - | - | 521 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 82 | 32 | - | - | 47 | - | - | - | 3 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 8,459 | 3,560 | - | - | 401 | - | 198 | - | 4,300 | - |
| GEOLOGICAL SURVEY..... | 30,667 | 30,324 | - | - | 343 | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 2,174 | 10 | - | - | 2,164 | - | 79 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,278 | 144 | 128 | - | 1,927 | - | - | - | - | - |
| DEPARTMENT OF LABOR, TOTAL..... | 2,052 | 1,787 | 34 | - | 85 | - | 99 | - | 47 | - |
| BUREAU OF LABOR STATISTICS..... | 1,422 | 1,422 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 290 | 290 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 340 | 75 | 34 | - | 85 | - | 99 | - | 47 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 21,099 | 12,343 | 887 | - | 2,150 | - | 1,722 | - | 3,997 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 7,390 | 1,256 | 887 | - | 650 | - | 600 | - | 3,997 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 1,127 | 5 | - | - | - | - | 1,122 | - | - | - |
| UNITED STATES COAST GUARD..... | 11,080 | 11,080 | - | - | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,502 | 2 | - | - | 1,500 | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 286,669 | 922 | 1,092 | 29,540 | 79,212 | 172,118 | 1,943 | 1,573 | 93 | 176 |
| CIVIL SERVICE COMMISSION..... | 83 | 83 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 5,450 | 50 | - | - | 4,558 | - | 809 | - | - | 33 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 637,034 | 238,696 | 260,267 | 366 | 60,761 | 69,389 | 7,183 | 168 | - | 204 |
| NATIONAL SCIENCE FOUNDATION..... | 244,977 | 11,200 | 990 | - | 200,951 | 24,003 | 5,907 | 128 | 34 | 1,764 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 1,600 | 600 | - | - | 1,000 | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 372 | 372 | - | - | - | - | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | 18,217 | 16,634 | - | - | 1,080 | - | - | - | 503 | - |
| VETERANS ADMINISTRATION..... | 5,260 | 5,180 | 5 | - | 35 | - | - | - | 40 | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS
BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-30. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | EXTRAMURAL | | | | | | | | | |
|---|------------|-----------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|---------|--------|
| | TOTAL | INTRA-MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | FOREIGN | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | | OTHER |
| TOTAL, ALL AGENCIES..... | 2,165,031 | 669,135 | 321,088 | 30,394 | 743,618 | 283,034 | 65,795 | 3,042 | 27,266 | 21,659 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 122,780 | 91,249 | 95 | - | 26,450 | - | 280 | - | 10 | 4,696 |
| AGRICULTURAL RESEARCH SERVICE..... | 76,861 | 71,250 | 95 | - | 1,289 | - | 156 | - | - | 4,071 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 25,460 | 871 | - | - | 24,465 | - | 124 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 4,550 | 4,492 | - | - | 58 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 236 | 236 | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 15,595 | 14,360 | - | - | 600 | - | - | - | 10 | 625 |
| STATISTICAL REPORTING SERVICE..... | 78 | 40 | - | - | 38 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 49,634 | 45,512 | - | - | 1,262 | - | 573 | - | 1,356 | 931 |
| BUREAU OF THE CENSUS..... | 406 | 344 | - | - | 32 | - | 30 | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 15,018 | 14,591 | - | - | 416 | - | - | - | - | 11 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 28,048 | 24,415 | - | - | 814 | - | 543 | - | 1,356 | 920 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,004 | 4,004 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 2,158 | 2,158 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 243,037 | 101,169 | 22,201 | - | 110,944 | 954 | 5,255 | 1,195 | - | 1,319 |
| DEPARTMENT OF THE ARMY..... | 46,597 | 28,020 | 915 | - | 15,577 | - | 1,378 | - | - | 707 |
| DEPARTMENT OF THE NAVY..... | 85,040 | 31,534 | 3,743 | - | 46,439 | 104 | 3,081 | - | - | 139 |
| DEPARTMENT OF THE AIR FORCE..... | 80,000 | 40,509 | 7,855 | - | 30,670 | - | 493 | - | - | 473 |
| DEFENSE AGENCIES..... | 31,400 | 1,106 | 9,688 | - | 18,258 | 850 | 303 | 1,195 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 451,822 | 136,089 | 3,899 | - | 248,023 | 2,000 | 39,296 | 105 | 12,478 | 11,932 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 66,711 | 18,429 | 2,420 | - | 32,917 | - | 10,757 | - | 2,026 | 162 |
| NATIONAL INSTITUTES OF HEALTH..... | 372,369 | 114,877 | 1,479 | - | 209,170 | - | 26,039 | 105 | 8,929 | 11,770 |
| OFFICE OF EDUCATION..... | 12,317 | 358 | - | - | 5,936 | 2,000 | 2,500 | - | 1,523 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 425 | 425 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 50,657 | 39,912 | 213 | - | 5,186 | - | 277 | - | 5,069 | - |
| BUREAU OF MINES..... | 6,457 | 5,457 | - | - | 1,000 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 44 | 24 | - | - | 17 | - | - | - | 3 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 9,551 | 4,146 | - | - | 250 | - | 155 | - | 5,000 | - |
| GEOLOGICAL SURVEY..... | 30,381 | 30,099 | - | - | 282 | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 1,600 | 10 | - | - | 1,590 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,624 | 176 | 213 | - | 2,047 | - | 122 | - | 66 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 2,578 | 2,268 | 40 | - | 99 | - | 115 | - | 56 | - |
| BUREAU OF LABOR STATISTICS..... | 1,461 | 1,461 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 720 | 720 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 397 | 87 | 40 | - | 99 | - | 115 | - | 56 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL.... | 20,607 | 12,648 | 1,871 | - | 2,098 | - | 600 | - | 3,390 | - |

| | | | | | | | | | | |
|--|---------|---------|---------|--------|---------|---------|--------|-------|--------|--------|
| AGRICULTURAL RESEARCH SERVICE..... | 74,861 | 71,250 | 95 | - | 1,289 | - | 156 | - | - | 4,071 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 25,460 | 871 | - | - | 24,465 | - | 124 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 4,550 | 4,492 | - | - | 58 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 236 | 236 | - | - | - | - | - | - | - | 625 |
| FOREST SERVICE..... | 15,595 | 14,360 | - | - | 600 | - | - | - | 10 | - |
| STATISTICAL REPORTING SERVICE..... | 78 | 40 | - | - | 38 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 49,634 | 45,512 | - | - | 1,262 | - | 573 | - | 1,356 | 931 |
| BUREAU OF THE CENSUS..... | 406 | 344 | - | - | 32 | - | 30 | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 15,018 | 14,591 | - | - | 416 | - | - | - | - | 11 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 28,048 | 24,415 | - | - | 814 | - | 543 | - | 1,356 | 920 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,004 | 4,004 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 2,158 | 2,158 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 243,037 | 101,169 | 22,201 | - | 110,944 | 954 | 5,255 | 1,195 | - | 1,319 |
| DEPARTMENT OF THE ARMY..... | 46,597 | 28,020 | 915 | - | 15,577 | - | 1,378 | - | - | 707 |
| DEPARTMENT OF THE NAVY..... | 85,040 | 31,534 | 3,743 | - | 46,439 | 104 | 3,081 | - | - | 139 |
| DEPARTMENT OF THE AIR FORCE..... | 80,000 | 40,509 | 7,855 | - | 30,670 | - | 493 | - | - | 473 |
| DEFENSE AGENCIES..... | 31,400 | 1,106 | 9,688 | - | 18,258 | 850 | 303 | 1,195 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 451,822 | 134,089 | 3,899 | - | 248,023 | 2,000 | 39,296 | 105 | 12,478 | 11,932 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 66,711 | 18,429 | 2,420 | - | 32,917 | - | 10,757 | - | 2,026 | 162 |
| NATIONAL INSTITUTES OF HEALTH..... | 372,369 | 114,877 | 1,479 | - | 209,170 | - | 26,039 | 105 | 8,929 | 11,770 |
| OFFICE OF EDUCATION..... | 12,317 | 358 | - | - | 5,936 | 2,000 | 2,500 | - | 1,523 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 425 | 425 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 50,657 | 39,912 | 213 | - | 5,186 | - | 277 | - | 5,069 | - |
| BUREAU OF MINES..... | 6,457 | 5,457 | - | - | 1,000 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 44 | 24 | - | - | 17 | - | - | - | 3 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 9,551 | 4,146 | - | - | 250 | - | 155 | - | 5,000 | - |
| GEOLOGICAL SURVEY..... | 30,381 | 30,099 | - | - | 282 | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 1,600 | 10 | - | - | 1,590 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,624 | 176 | 213 | - | 2,047 | - | 122 | - | 66 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 2,578 | 2,268 | 40 | - | 99 | - | 115 | - | 56 | - |
| BUREAU OF LABOR STATISTICS..... | 1,461 | 1,461 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 720 | 720 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 397 | 87 | 40 | - | 99 | - | 115 | - | 56 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 20,607 | 12,648 | 1,871 | - | 2,098 | - | 600 | - | 3,390 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 6,463 | 1,099 | 776 | - | 598 | - | 600 | - | 3,390 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 1,100 | 5 | 1,095 | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 11,542 | 11,542 | - | - | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,502 | 2 | - | - | 1,500 | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 278,118 | 587 | 809 | 29,081 | 74,380 | 169,956 | 1,646 | 1,493 | 50 | 116 |
| CIVIL SERVICE COMMISSION..... | 106 | 106 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 5,941 | 50 | - | - | 4,502 | - | 801 | - | - | 588 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 626,068 | 198,372 | 289,979 | 313 | 51,040 | 79,193 | 6,932 | 49 | - | 190 |
| NATIONAL SCIENCE FOUNDATION..... | 285,136 | 17,640 | 1,976 | 1,000 | 217,085 | 30,931 | 10,020 | 200 | 4,377 | 1,887 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 2,400 | 960 | - | - | 1,440 | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 396 | 396 | - | - | - | - | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | 20,346 | 18,042 | - | - | 1,064 | - | - | - | 440 | - |
| VETERANS ADMINISTRATION..... | 5,405 | 5,315 | 5 | - | 45 | - | - | - | 40 | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-31. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA- MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|---|-----------|------------------------|-------------------------------|---|---------------------------------|---|--|--|--------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN. BY NON- PROFIT INSTI- TUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 2,399,104 | 704,806 | 401,254 | 32,772 | 842,949 | 286,068 | 73,353 | 2,792 | 31,276 | 23,834 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 127,785 | 90,619 | 95 | - | 28,593 | - | 256 | - | 10 | 8,012 |
| AGRICULTURAL RESEARCH SERVICE..... | 79,088 | 71,067 | 95 | - | 988 | - | 126 | - | - | 6,812 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 27,969 | 930 | - | - | 26,909 | - | 130 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 4,474 | 4,416 | - | - | 58 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 236 | 236 | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 15,740 | 13,930 | - | - | 600 | - | - | - | 10 | 1,200 |
| STATISTICAL REPORTING SERVICE..... | 78 | 40 | - | - | 38 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 57,730 | 53,022 | - | - | 1,508 | - | 692 | - | 1,654 | 864 |
| BUREAU OF THE CENSUS..... | 406 | 321 | - | - | 55 | - | 30 | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 15,341 | 14,880 | - | - | 461 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF BUSINESS ECONOMICS..... | 33,944 | 29,772 | - | - | 992 | - | 662 | - | 1,654 | 864 |
| OFFICE OF TELECOMMUNICATIONS..... | 4,508 | 4,508 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 245,486 | 103,663 | 22,323 | - | 110,864 | 1,052 | 5,115 | 1,100 | 20 | 1,349 |
| DEPARTMENT OF THE ARMY..... | 46,639 | 27,287 | 850 | - | 16,334 | - | 1,358 | - | 20 | 790 |
| DEPARTMENT OF THE NAVY..... | 88,747 | 31,902 | 7,258 | - | 46,134 | 52 | 3,292 | - | - | 109 |
| DEPARTMENT OF THE AIR FORCE..... | 81,000 | 43,794 | 7,399 | - | 28,892 | - | 465 | - | - | 450 |
| DEFENSE AGENCIES..... | 29,100 | 680 | 6,816 | - | 19,504 | 1,000 | - | 1,100 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 487,842 | 160,275 | 4,145 | - | 257,388 | - | 44,309 | 114 | 11,243 | 10,368 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. NATIONAL INSTITUTES OF HEALTH..... | 68,810 | 19,014 | 2,582 | - | 34,067 | - | 11,048 | - | 1,906 | 193 |
| OFFICE OF EDUCATION..... | 407,337 | 140,366 | 1,563 | - | 219,121 | - | 27,161 | 114 | 8,837 | 10,175 |
| SOCIAL SECURITY ADMINISTRATION..... | 11,215 | 415 | - | - | 4,200 | - | 6,100 | - | 500 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 53,114 | 41,379 | 329 | - | 6,073 | - | 264 | - | 5,069 | - |
| BUREAU OF MINES..... | 7,686 | 6,186 | - | - | 1,500 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 30 | 20 | - | - | 7 | - | - | - | 3 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 9,712 | 4,257 | - | - | 300 | - | 155 | - | 5,000 | - |
| GEOLOGICAL SURVEY..... | 31,024 | 30,704 | - | - | 320 | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 1,700 | 10 | - | - | 1,690 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,962 | 202 | 329 | - | 2,256 | - | 109 | - | 64 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 2,712 | 2,371 | 44 | - | 109 | - | 127 | - | 61 | - |
| BUREAU OF LABOR STATISTICS..... | 1,463 | 1,463 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 812 | 812 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 437 | 96 | 44 | - | 109 | - | 127 | - | 61 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 22,949 | 13,276 | 2,803 | - | 2,086 | - | 800 | - | 3,984 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 7,564 | 1,286 | 908 | - | 586 | - | 800 | - | 3,984 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. UNITED STATES COAST GUARD..... | 1,900 | 5 | 1,895 | - | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 11,983 | 11,983 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | 1,502 | 2 | - | - | 1,500 | - | - | - | - | - |

| | | | | | | | | | | |
|--|---------|---------|---------|--------|---------|---------|--------|-------|--------|--------|
| FARMER COOPERATIVE SERVICE..... | 15,740 | 13,930 | - | - | 600 | - | - | - | - | 1,200 |
| FOREST SERVICE..... | 78 | 40 | - | - | 38 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 57,730 | 53,012 | - | - | 1,508 | - | - | - | 692 | 864 |
| BUREAU OF THE CENSUS..... | 406 | 321 | - | - | 55 | - | - | - | 30 | - |
| NATIONAL BUREAU OF STANDARDS..... | 15,341 | 14,880 | - | - | 461 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 33,944 | 29,772 | - | - | 992 | - | - | - | 662 | 864 |
| OFFICE OF BUSINESS ECONOMICS..... | 4,508 | 4,508 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 3,531 | 3,531 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 245,486 | 103,663 | 22,323 | - | 110,864 | 1,052 | 5,115 | 1,100 | 20 | 1,349 |
| DEPARTMENT OF THE ARMY..... | 46,639 | 27,287 | 850 | - | 16,334 | - | 1,358 | - | 20 | 790 |
| DEPARTMENT OF THE NAVY..... | 88,747 | 31,902 | 7,258 | - | 46,134 | 52 | 3,292 | - | - | 109 |
| DEPARTMENT OF THE AIR FORCE..... | 81,000 | 43,794 | 7,399 | - | 28,892 | - | 465 | - | - | 450 |
| DEFENSE AGENCIES..... | 29,100 | 680 | 6,816 | - | 19,504 | 1,000 | - | 1,100 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 487,842 | 160,275 | 4,145 | - | 257,388 | - | 44,309 | 114 | 11,243 | 10,368 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 68,810 | 19,014 | 2,582 | - | 34,067 | - | 11,048 | - | 1,906 | 193 |
| NATIONAL INSTITUTES OF HEALTH..... | 407,337 | 140,366 | 1,563 | - | 219,121 | - | 27,161 | 114 | 8,837 | 10,175 |
| OFFICE OF EDUCATION..... | 11,215 | 415 | - | - | 4,200 | - | 6,100 | - | 500 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 480 | 480 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 53,114 | 41,379 | 329 | - | 6,073 | - | 264 | - | 5,069 | - |
| BUREAU OF MINES..... | 7,686 | 6,186 | - | - | 1,500 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 30 | 20 | - | - | 7 | - | - | - | 3 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 9,712 | 4,257 | - | - | 300 | - | 155 | - | 5,000 | - |
| GEOLOGICAL SURVEY..... | 31,024 | 30,704 | - | - | 320 | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 1,700 | 10 | - | - | 1,690 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,962 | 202 | 329 | - | 2,256 | - | 109 | - | 66 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 2,712 | 2,371 | 44 | - | 109 | - | 127 | - | 61 | - |
| BUREAU OF LABOR STATISTICS..... | 1,463 | 1,463 | - | - | - | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 812 | 812 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 437 | 96 | 44 | - | 109 | - | 127 | - | 61 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 22,949 | 13,276 | 2,803 | - | 2,086 | - | 800 | - | 3,984 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 7,564 | 1,286 | 908 | - | 586 | - | 800 | - | 3,984 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 1,900 | 5 | 1,895 | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 11,983 | 11,983 | - | - | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,502 | 2 | - | - | 1,500 | - | - | - | - | - |
| OTHER AGENCIES | 266,359 | 456 | 658 | 28,372 | 66,519 | 167,365 | 1,520 | 1,299 | 50 | 120 |
| ATOMIC ENERGY COMMISSION..... | 113 | 113 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | 8,428 | 75 | - | - | 6,716 | - | 801 | - | - | 836 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 688,371 | 189,429 | 368,852 | 2,400 | 39,052 | 83,697 | 4,673 | 79 | - | 189 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 399,636 | 18,011 | 2,000 | 2,000 | 318,104 | 33,954 | 14,796 | 200 | 8,475 | 2,096 |
| NATIONAL SCIENCE FOUNDATION..... | 5,500 | 2,200 | - | - | 3,300 | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 432 | 432 | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 27,247 | 23,985 | - | - | 2,592 | - | - | - | 670 | - |
| SMITHSONIAN INSTITUTION..... | 5,600 | 5,510 | 5 | - | 45 | - | - | - | 40 | - |
| VETERANS ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-32. FEDERAL OBLIGATIONS FOR BASIC RESEARCH BY DETAILED FIELD OF SCIENCE,
FISCAL YEARS 1970, 1971, AND 1972
(THOUSANDS OF DOLLARS)

| FIELD OF SCIENCE | ACTUAL, 1970 | ESTIMATES | |
|--|--------------|-----------|-----------|
| | | 1971 | 1972 |
| TOTAL, ALL FIELDS..... | 2,062,256 | 2,165,031 | 2,399,104 |
| LIFE SCIENCES, TOTAL..... | 576,041 | 631,159 | 735,335 |
| BIOLOGICAL..... | 427,535 | 456,290 | 552,139 |
| CLINICAL MEDICAL..... | 31,683 | 33,940 | 30,257 |
| OTHER MEDICAL SCIENCES..... | 112,333 | 135,148 | 148,936 |
| LIFE SCIENCES, NEC..... | 4,490 | 5,781 | 4,003 |
| PSYCHOLOGY, TOTAL..... | 57,237 | 60,150 | 65,977 |
| BIOLOGICAL ASPECTS..... | 29,536 | 31,424 | 36,536 |
| SOCIAL ASPECTS..... | 24,721 | 27,517 | 28,023 |
| PSYCHOLOGICAL SCIENCES, NEC..... | 2,980 | 1,209 | 1,418 |
| PHYSICAL SCIENCES, TOTAL..... | 704,453 | 725,546 | 729,986 |
| ASTRONOMY..... | 203,882 | 213,820 | 188,742 |
| CHEMISTRY..... | 143,106 | 145,051 | 187,138 |
| PHYSICS..... | 352,954 | 358,450 | 352,218 |
| PHYSICAL SCIENCES, NEC..... | 4,511 | 8,225 | 1,888 |
| ENVIRONMENTAL SCIENCES, TOTAL..... | 352,380 | 361,592 | 419,254 |
| ATMOSPHERIC SCIENCES..... | 173,129 | 172,838 | 197,571 |
| GEOLOGICAL SCIENCES..... | 124,308 | 121,851 | 141,416 |
| OCEANOGRAPHY (EXCLUDING BIOLOGICAL)..... | 54,565 | 61,622 | 74,861 |
| ENVIRONMENTAL SCIENCE, NEC..... | 378 | 5,281 | 5,406 |
| MATHEMATICS..... | 58,906 | 53,108 | 58,194 |
| ENGINEERING, TOTAL..... | 242,641 | 239,695 | 247,992 |
| AERONAUTICAL..... | 58,720 | 59,552 | 51,096 |
| ASTRONAUTICAL..... | 16,975 | 14,930 | 14,307 |
| CHEMICAL..... | 8,925 | 8,753 | 11,693 |
| CIVIL..... | 7,634 | 6,958 | 17,633 |
| ELECTRICAL..... | 35,236 | 35,041 | 33,803 |
| MECHANICAL..... | 42,972 | 39,958 | 41,840 |
| METALLURGY & MATERIALS..... | 53,441 | 52,883 | 53,150 |
| ENGINEERING, NEC..... | 18,738 | 21,620 | 24,470 |
| SOCIAL SCIENCES, TOTAL..... | 66,118 | 81,421 | 99,851 |
| ANTHROPOLOGY..... | 8,050 | 9,248 | 11,462 |
| ECONOMICS..... | 25,936 | 30,395 | 33,538 |
| HISTORY..... | 4,424 | 4,878 | 5,051 |
| LINGUISTICS..... | 1,811 | 1,797 | 2,250 |
| POLITICAL SCIENCE..... | 3,759 | 3,405 | 4,278 |
| SOCIOLOGY..... | 13,122 | 16,750 | 20,505 |
| SOCIAL SCIENCES, NEC..... | 9,016 | 14,948 | 22,767 |
| OTHER SCIENCES, NEC..... | 4,480 | 12,360 | 42,515 |

TABLE C-33. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOL- OGY | PHYSICAL SCIENCES | ENVIRON- MENTAL SCIENCES | MATHE- MATICS | ENGI- NEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|---|--------------------|-------------------|------------------|-------------------|-----------------------------|------------------|-------------------|-----------------|-----------------------|
| TOTAL, ALL AGENCIES..... | 2,062,256 | 576,041 | 57,237 | 704,453 | 352,380 | 58,906 | 242,641 | 66,118 | 4,480 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 115,709 | 75,667 | 5 | 17,796 | 1,573 | 307 | 10,292 | 10,069 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 73,342 | 49,529 | 5 | 15,181 | 276 | 99 | 8,042 | 210 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 23,200 | 15,954 | - | 1,160 | 133 | - | 795 | 5,158 | - |
| ECONOMIC RESEARCH SERVICE..... | 4,322 | - | - | - | - | - | - | 4,322 | - |
| FARMER COOPERATIVE SERVICE..... | 221 | - | - | - | - | - | - | 221 | - |
| FOREST SERVICE..... | 14,548 | 10,184 | - | 1,455 | 1,164 | 145 | 1,455 | 145 | - |
| STATISTICAL REPORTING SERVICE..... | 76 | - | - | - | - | 63 | - | 13 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 39,201 | 6,943 | 319 | 11,510 | 11,571 | 420 | 3,887 | 4,367 | 184 |
| BUREAU OF THE CENSUS..... | 308 | - | 109 | - | - | 175 | - | 21 | - |
| NATIONAL BUREAU OF STANDARDS..... | 14,350 | - | - | 11,089 | - | 242 | 2,835 | - | 184 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF BUSINESS ECONOMICS..... | 21,038 3,505 | 6,943 - | 210 - | 421 - | 11,571 - | - - | 1,052 - | 841 3,505 | - - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 246,670 | 28,886 | 10,482 | 68,411 | 49,329 | 28,994 | 58,753 | 1,815 | - |
| DEPARTMENT OF THE ARMY..... | 45,451 | 16,923 | 878 | 11,181 | 4,379 | 1,925 | 9,552 | 613 | - |
| DEPARTMENT OF THE NAVY..... | 81,944 | 9,763 | 3,946 | 24,018 | 27,081 | 5,728 | 11,408 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 81,000 | 2,200 | 759 | 28,602 | 17,869 | 5,634 | 25,736 | 200 | - |
| DEFENSE AGENCIES..... | 38,275 | - | 4,899 | 4,610 | - | 15,707 | 12,057 | 1,002 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 387,940 | 300,257 | 35,380 | 23,957 | 165 | 3,182 | 2,287 | 22,528 | 184 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. NATIONAL INSTITUTES OF HEALTH..... | 60,340 319,385 | 23,142 277,115 | 20,674 12,406 | 734 23,223 | - 165 | - 3,182 | - 2,287 | 15,790 823 | - 184 |
| OFFICE OF EDUCATION..... | 7,812 | - | 2,300 | - | - | - | - | 5,512 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 403 | - | - | - | - | - | - | 403 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 49,923 | 8,886 | - | 8,399 | 29,183 | 751 | 2,313 | 350 | 41 |
| BUREAU OF LAND MANAGEMENT..... | 15 | 15 | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | 6,248 | - | - | 4,120 | 173 | 120 | 1,835 | - | - |
| BUREAU OF RECLAMATION..... | 82 | 12 | - | - | - | - | 39 | 31 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.. GEOLOGICAL SURVEY..... | 8,459 30,667 | 8,459 - | - - | - 1,945 | - 28,146 | - 576 | - - | - - | - - |
| OFFICE OF SALINE WATER..... | 2,174 | - | - | 2,174 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,278 | 400 | - | 160 | 864 | 55 | 439 | 319 | 41 |
| DEPARTMENT OF LABOR, TOTAL..... | 2,052 | - | - | - | - | - | - | 2,052 | - |
| BUREAU OF LABOR STATISTICS..... | 1,422 | - | - | - | - | - | - | 1,422 | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 290 | - | - | - | - | - | - | 290 | - |
| MANPOWER ADMINISTRATION..... | 340 | - | - | - | - | - | - | 340 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 21,099 | - | 10 | - | 11,130 | 55 | 8,797 | 1,107 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 7,390 | - | - | - | - | - | 7,020 | 370 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. UNITED STATES COAST GUARD..... | 1,127 11,080 | - - | - - | - - | - 11,080 | - - | 1,127 - | - - | - - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,502 | - | 10 | - | 50 | 55 | 650 | 737 | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 286,669 | 37,599 | - | 230,966 | - | 5,779 | 12,325 | - | - |
| CIVIL SERVICE COMMISSION..... | 83 | - | 83 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 5,450 | 2,254 | - | 2,501 | 561 | - | 132 | 2 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN.. NATIONAL SCIENCE FOUNDATION..... | 637,034 244,977 | 50,509 52,662 | 2,854 7,600 | 262,874 74,649 | 195,218 53,031 | 2,350 17,061 | 121,999 21,669 | 1,230 14,234 | 4,071 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 1,600 | - | - | - | - | - | - | 1,600 | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 372 | 114 | 4 | 95 | 33 | 7 | 112 | 7 | - |
| SMITHSONIAN INSTITUTION..... | 18,217 | 7,709 | - | 3,195 | 586 | - | - | 6,727 | - |
| VETERANS ADMINISTRATION..... | 5,260 | 4,555 | 500 | 100 | - | - | 75 | 30 | - |

TABLE C-34. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|------------------|----------------|---------------|-------------------|------------------------|---------------|----------------|-----------------|--------------------|
| TOTAL, ALL AGENCIES..... | 2,165,031 | 631,159 | 60,150 | 725,546 | 361,592 | 53,108 | 239,695 | 81,421 | 12,360 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 122,780 | 81,095 | 5 | 18,093 | 1,682 | 320 | 10,760 | 10,825 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 76,861 | 52,665 | 5 | 15,261 | 293 | 99 | 8,329 | 209 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 25,460 | 17,513 | - | 1,273 | 141 | - | 872 | 5,661 | - |
| ECONOMIC RESEARCH SERVICE..... | 4,550 | - | - | - | - | - | - | 4,550 | - |
| FARMER COOPERATIVE SERVICE..... | 236 | - | - | - | - | - | - | 236 | - |
| FOREST SERVICE..... | 15,595 | 10,917 | - | 1,559 | 1,248 | 156 | 1,559 | 156 | - |
| STATISTICAL REPORTING SERVICE..... | 78 | - | - | - | - | 65 | - | 13 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 49,634 | 9,256 | 425 | 13,321 | 15,426 | 926 | 4,935 | 5,154 | 191 |
| BUREAU OF THE CENSUS..... | 406 | - | 145 | - | - | 236 | - | 25 | - |
| NATIONAL BUREAU OF STANDARDS..... | 15,018 | - | - | 11,617 | - | 252 | 2,958 | - | 191 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 28,048 | 9,256 | 280 | 560 | 15,426 | - | 1,401 | 1,125 | - |
| OFFICE OF BUSINESS ECONOMICS..... | 4,004 | - | - | - | - | - | - | 4,004 | - |
| OFFICE OF TELECOMMUNICATIONS..... | 2,158 | - | - | 1,144 | - | 438 | 576 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 243,037 | 27,999 | 10,008 | 64,912 | 55,791 | 21,634 | 60,577 | 2,116 | - |
| DEPARTMENT OF THE ARMY..... | 46,597 | 16,084 | 1,126 | 11,302 | 4,964 | 2,099 | 10,325 | 697 | - |
| DEPARTMENT OF THE NAVY..... | 85,040 | 10,215 | 3,734 | 23,002 | 29,999 | 5,717 | 12,373 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 80,000 | 1,700 | 1,050 | 23,661 | 20,828 | 5,617 | 26,844 | 300 | - |
| DEFENSE AGENCIES..... | 31,400 | - | 4,098 | 6,947 | - | 8,201 | 11,035 | 1,119 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 451,822 | 347,629 | 37,672 | 29,247 | 199 | 3,848 | 2,764 | 30,254 | 209 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 66,711 | 25,702 | 19,751 | 1,156 | - | - | - | 20,102 | - |
| NATIONAL INSTITUTES OF HEALTH..... | 372,369 | 321,927 | 14,348 | 28,091 | 199 | 3,848 | 2,764 | 983 | 209 |
| OFFICE OF EDUCATION..... | 12,317 | - | 3,573 | - | - | - | - | 8,744 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 425 | - | - | - | - | - | - | 425 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 50,657 | 10,024 | - | 7,773 | 28,964 | 684 | 2,801 | 366 | 45 |
| BUREAU OF MINES..... | 6,457 | - | - | 3,972 | 206 | 7 | 2,272 | - | - |
| BUREAU OF RECLAMATION..... | 44 | 12 | - | - | - | - | 32 | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 9,551 | 9,551 | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 30,381 | - | - | 2,017 | 27,761 | 603 | - | - | - |
| OFFICE OF SALINE WATER..... | 1,600 | - | - | 1,600 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,624 | 461 | - | 184 | 997 | 74 | 497 | 366 | 45 |
| DEPARTMENT OF LABOR, TOTAL..... | 2,578 | - | - | - | - | - | - | 2,578 | - |
| BUREAU OF LABOR STATISTICS..... | 1,461 | - | - | - | - | - | - | 1,461 | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 720 | - | - | - | - | - | - | 720 | - |
| MANPOWER ADMINISTRATION..... | 397 | - | - | - | - | - | - | 397 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 20,607 | - | 10 | - | 11,592 | 55 | 7,870 | 1,080 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 6,463 | - | - | - | - | - | 6,120 | 343 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 1,100 | - | - | - | - | - | 1,100 | - | - |
| UNITED STATES COAST GUARD..... | 11,542 | - | - | - | 11,542 | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,502 | - | 10 | - | 50 | 55 | 650 | 737 | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 278,118 | 36,550 | - | 224,019 | - | 5,370 | 12,179 | - | - |
| CIVIL SERVICE COMMISSION..... | 106 | - | 106 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 5,941 | 2,786 | - | 2,458 | 565 | - | 130 | 2 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 626,068 | 42,008 | 2,835 | 282,596 | 184,826 | 1,410 | 112,393 | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 285,136 | 60,525 | 8,485 | 79,341 | 61,861 | 18,853 | 25,082 | 19,074 | 11,915 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 2,400 | - | - | - | - | - | - | 2,400 | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 396 | 121 | 4 | 101 | 35 | 8 | 119 | 8 | - |
| SMITHSONIAN INSTITUTION..... | 20,346 | 8,606 | - | 3,560 | 651 | - | - | 7,529 | - |
| VETERANS ADMINISTRATION..... | 5,405 | 4,560 | 600 | 125 | - | - | 85 | 35 | - |

TABLE C-35. FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|-----------|---------------|------------|-------------------|------------------------|-------------|-------------|-----------------|--------------------|
| TOTAL, ALL AGENCIES..... | 2,399,104 | 735,335 | 65,977 | 729,986 | 419,254 | 58,194 | 247,992 | 99,851 | 42,515 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 127,585 | 85,368 | 5 | 18,015 | 1,715 | 320 | 10,855 | 11,307 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 79,088 | 55,117 | 5 | 15,043 | 293 | 98 | 8,323 | 209 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 27,969 | 19,232 | - | 1,398 | 163 | - | 958 | 6,218 | - |
| ECONOMIC RESEARCH SERVICE..... | 4,474 | - | - | - | - | - | - | 4,474 | - |
| FARMER COOPERATIVE SERVICE..... | 236 | - | - | - | - | - | - | 236 | - |
| FOREST SERVICE..... | 15,740 | 11,019 | - | 1,574 | 1,259 | 157 | 1,574 | 157 | - |
| STATISTICAL REPORTING SERVICE..... | 78 | - | - | - | - | 65 | - | 13 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 57,730 | 11,202 | 484 | 13,564 | 18,670 | 1,204 | 6,524 | 5,891 | 191 |
| BUREAU OF THE CENSUS..... | 406 | - | 145 | - | - | 235 | - | 26 | - |
| NATIONAL BUREAU OF STANDARDS..... | 15,341 | - | - | 11,942 | - | 252 | 2,956 | 1,357 | 191 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 33,944 | 11,202 | 339 | 679 | 18,670 | - | 1,697 | 4,508 | - |
| OFFICE OF BUSINESS ECONOMICS..... | 4,508 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 3,531 | - | - | 943 | - | 717 | 1,871 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 245,486 | 28,068 | 10,078 | 58,670 | 58,781 | 23,682 | 64,414 | 1,793 | - |
| DEPARTMENT OF THE ARMY..... | 46,639 | 15,617 | 1,005 | 10,788 | 5,321 | 2,017 | 11,161 | 730 | - |
| DEPARTMENT OF THE NAVY..... | 88,747 | 10,760 | 3,790 | 22,788 | 32,217 | 6,002 | 13,190 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 81,000 | 1,691 | 1,059 | 23,869 | 21,243 | 5,732 | 27,103 | 303 | - |
| DEFENSE AGENCIES..... | 29,100 | - | 4,224 | 1,225 | - | 9,931 | 12,960 | 760 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 487,842 | 375,961 | 40,415 | 33,083 | 228 | 4,395 | 3,155 | 30,378 | 227 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 68,810 | 25,709 | 21,267 | 996 | - | - | - | 20,838 | - |
| NATIONAL INSTITUTES OF HEALTH..... | 407,337 | 350,252 | 15,878 | 32,087 | 228 | 4,395 | 3,155 | 1,115 | 227 |
| OFFICE OF EDUCATION..... | 11,215 | - | 3,270 | - | - | - | - | 7,945 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 480 | - | - | - | - | - | - | 480 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 53,114 | 10,243 | - | 10,991 | 29,430 | 720 | 1,249 | 432 | 49 |
| BUREAU OF MINES..... | 7,686 | - | - | 6,986 | 56 | 7 | 637 | - | - |
| BUREAU OF RECLAMATION..... | 30 | 2 | - | - | - | - | 28 | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.. | 9,712 | 9,712 | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 31,024 | - | - | 2,105 | 28,287 | 632 | - | - | - |
| OFFICE OF SALINE WATER..... | 1,700 | - | - | 1,700 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 2,962 | 529 | - | 200 | 1,087 | 81 | 584 | 432 | 49 |
| DEPARTMENT OF LABOR, TOTAL..... | 2,712 | - | - | - | - | - | - | 2,712 | - |
| BUREAU OF LABOR STATISTICS..... | 1,463 | - | - | - | - | - | - | 1,463 | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 812 | - | - | - | - | - | - | 812 | - |
| MANPOWER ADMINISTRATION..... | 437 | - | - | - | - | - | - | 437 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 22,949 | - | 10 | - | 12,033 | 55 | 9,714 | 1,137 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 7,564 | - | - | - | - | - | 7,164 | 400 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 1,900 | - | - | - | - | - | 1,900 | - | - |
| UNITED STATES COAST GUARD..... | 11,983 | - | - | - | 11,983 | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,502 | - | 10 | - | 50 | 55 | 650 | 737 | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 266,359 | 35,927 | - | 214,200 | - | 4,800 | 11,432 | - | - |
| CIVIL SERVICE COMMISSION..... | 113 | - | 113 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 8,428 | 5,234 | - | 2,458 | 604 | - | 130 | 2 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 688,371 | 89,869 | 804 | 275,438 | 222,071 | 2,000 | 98,189 | 32,597 | 42,048 |
| NATIONAL SCIENCE FOUNDATION..... | 399,636 | 74,648 | 13,463 | 98,771 | 74,984 | 21,010 | 42,115 | 5,500 | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 5,500 | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 432 | 132 | 5 | 111 | 38 | 8 | 130 | 8,059 | - |
| SMITHSONIAN INSTITUTION..... | 27,247 | 13,928 | 600 | 4,560 | 700 | - | - | - | - |
| VETERANS ADMINISTRATION..... | 5,600 | 4,755 | - | 125 | - | - | 85 | 35 | - |

TABLE C-36. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 57,237 | 29,536 | 24,721 | 2,980 | 704,453 | 203,882 | 143,106 | 352,954 | 4,511 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 5 | - | 5 | - | 17,796 | - | 15,306 | 2,490 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 5 | - | 5 | - | 15,181 | - | 13,273 | 1,908 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 1,160 | - | 1,160 | - | - |
| FOREST SERVICE..... | - | - | - | - | 1,455 | - | 873 | 582 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 319 | 210 | 109 | - | 11,510 | 823 | 4,114 | 6,246 | 327 |
| BUREAU OF THE CENSUS..... | 109 | - | 109 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | 11,089 | 823 | 3,693 | 6,246 | 327 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 210 | 210 | - | - | 421 | - | 421 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 10,482 | 2,461 | 7,197 | 824 | 68,411 | 9,578 | 11,884 | 42,891 | 4,058 |
| DEPARTMENT OF THE ARMY..... | 878 | 295 | 126 | 457 | 11,181 | - | 4,012 | 6,972 | 197 |
| DEPARTMENT OF THE NAVY..... | 3,946 | 1,040 | 2,539 | 367 | 24,018 | 3,796 | 2,235 | 17,987 | - |
| DEPARTMENT OF THE AIR FORCE..... | 759 | 63 | 696 | - | 28,602 | 5,782 | 4,888 | 17,932 | - |
| DEFENSE AGENCIES..... | 4,899 | 1,063 | 3,836 | - | 4,610 | - | 749 | - | 3,851 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 35,380 | 19,339 | 15,845 | 196 | 23,957 | - | 23,876 | 49 | 32 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 20,674 | 11,607 | 9,067 | - | 734 | - | 734 | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 12,406 | 7,732 | 4,674 | - | 23,223 | - | 23,142 | 49 | 32 |
| OFFICE OF EDUCATION..... | 2,300 | - | 2,104 | 196 | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | - | - | - | - | 8,399 | - | 7,220 | 1,179 | - |
| BUREAU OF MINES..... | - | - | - | - | 4,120 | - | 3,521 | 599 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 1,945 | - | 1,369 | 576 | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | 2,174 | - | 2,174 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | - | - | - | - | 160 | - | 156 | 4 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 10 | - | 10 | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 10 | - | 10 | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | - | - | - | - | 230,966 | - | 39,016 | 191,950 | - |
| CIVIL SERVICE COMMISSION..... | 83 | - | 83 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | - | - | - | - | 2,501 | - | 1,572 | 929 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 2,854 | 2,854 | - | - | 262,874 | 170,358 | 18,287 | 74,229 | - |
| NATIONAL SCIENCE FOUNDATION..... | 7,600 | 4,210 | 1,430 | 1,960 | 74,649 | 19,922 | 21,741 | 32,892 | 94 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 4 | 2 | 2 | - | 95 | 6 | 30 | 59 | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | 3,195 | 3,195 | - | - | - |
| VETERANS ADMINISTRATION..... | 500 | 460 | 40 | - | 100 | - | 60 | 40 | - |

TABLE C-37. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 60,150 | 31,424 | 27,517 | 1,209 | 725,546 | 213,820 | 145,051 | 358,450 | 8,225 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 5 | - | 5 | - | 18,093 | - | 15,469 | 2,624 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 5 | - | 5 | - | 15,261 | - | 13,260 | 2,001 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 1,273 | - | 1,273 | - | - |
| FOREST SERVICE..... | - | - | - | - | 1,559 | - | 936 | 623 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 425 | 280 | 145 | - | 13,321 | 859 | 4,439 | 6,538 | 1,485 |
| BUREAU OF THE CENSUS..... | 145 | - | 145 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | 11,617 | 859 | 3,879 | 6,538 | 341 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 280 | 280 | - | - | 560 | - | 560 | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | - | - | - | - | 1,144 | - | - | - | 1,144 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 10,008 | 2,378 | 6,751 | 879 | 64,912 | 6,115 | 12,015 | 40,175 | 6,607 |
| DEPARTMENT OF THE ARMY..... | 1,126 | 367 | 320 | 439 | 11,302 | - | 3,820 | 7,150 | 332 |
| DEPARTMENT OF THE NAVY..... | 3,734 | 893 | 2,401 | 440 | 23,002 | 2,547 | 3,026 | 17,429 | - |
| DEPARTMENT OF THE AIR FORCE..... | 1,050 | 105 | 945 | - | 23,661 | 3,568 | 4,555 | 15,538 | - |
| DEFENSE AGENCIES..... | 4,098 | 1,013 | 3,085 | - | 6,947 | - | 614 | 58 | 6,275 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 37,672 | 19,104 | 18,568 | - | 29,247 | - | 29,148 | 61 | 38 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 19,751 | 10,209 | 9,542 | - | 1,156 | - | 1,156 | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 14,348 | 8,895 | 5,453 | - | 28,091 | - | 27,992 | 61 | 38 |
| OFFICE OF EDUCATION..... | 3,573 | - | 3,573 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | - | - | - | - | 7,773 | - | 6,559 | 1,214 | - |
| BUREAU OF MINES..... | - | - | - | - | 3,972 | - | 3,366 | 606 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 2,017 | - | 1,414 | 603 | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | 1,600 | - | 1,600 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | - | - | - | - | 184 | - | 179 | 5 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 10 | - | 10 | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 10 | - | 10 | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | - | - | - | - | 224,019 | - | 36,755 | 187,264 | - |
| CIVIL SERVICE COMMISSION..... | 106 | - | 106 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | - | - | - | - | 2,458 | - | 1,545 | 913 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 2,835 | 2,835 | - | - | 282,596 | 180,043 | 16,058 | 86,495 | - |
| NATIONAL SCIENCE FOUNDATION..... | 8,485 | 6,285 | 1,870 | 330 | 79,341 | 23,236 | 22,956 | 33,054 | 95 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 4 | 2 | - | - | 101 | 32 | - | 62 | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | 3,560 | 3,560 | - | - | - |
| VETERANS ADMINISTRATION..... | 600 | 540 | 60 | - | 125 | - | 75 | 50 | - |

TABLE C-38. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 65,977 | 36,536 | 28,023 | 1,418 | 729,986 | 188,742 | 187,138 | 352,218 | 1,888 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 5 | - | 5 | - | 18,015 | - | 15,388 | 2,627 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 5 | - | 5 | - | 15,043 | - | 13,046 | 1,997 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 1,398 | - | 1,398 | - | - |
| FOREST SERVICE..... | - | - | - | - | 1,574 | - | 944 | 630 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 484 | 339 | 145 | - | 13,564 | 858 | 4,705 | 7,660 | 341 |
| BUREAU OF THE CENSUS..... | 145 | - | 145 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | 11,942 | 858 | 4,026 | 6,717 | 341 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 339 | 339 | - | - | 679 | - | 679 | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | - | - | - | - | 943 | - | - | 943 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 10,078 | 2,569 | 6,324 | 1,185 | 58,670 | 6,178 | 11,040 | 40,182 | 1,270 |
| DEPARTMENT OF THE ARMY..... | 1,005 | 326 | 269 | 410 | 10,788 | - | 3,631 | 6,887 | 270 |
| DEPARTMENT OF THE NAVY..... | 3,790 | 917 | 2,473 | 400 | 22,788 | 2,520 | 2,831 | 17,437 | - |
| DEPARTMENT OF THE AIR FORCE..... | 1,059 | 106 | 953 | - | 23,869 | 3,658 | 4,578 | 15,633 | - |
| DEFENSE AGENCIES..... | 4,224 | 1,220 | 2,629 | 375 | 1,225 | - | - | 225 | 1,000 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 40,415 | 21,841 | 18,574 | - | 33,083 | - | 32,970 | 69 | 44 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 21,267 | 12,109 | 9,158 | - | 996 | - | 996 | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 15,878 | 9,732 | 6,146 | - | 32,087 | - | 31,974 | 69 | 44 |
| OFFICE OF EDUCATION..... | 3,270 | - | 3,270 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | - | - | - | - | 10,991 | - | 7,637 | 3,354 | - |
| BUREAU OF MINES..... | - | - | - | - | 6,986 | - | 4,270 | 2,716 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 2,105 | - | 1,473 | 632 | - |
| OFFICE OF SALINE WATER..... | - | - | - | - | 1,700 | - | 1,700 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | - | - | - | - | 200 | - | 194 | 6 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 10 | - | 10 | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 10 | - | 10 | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | - | - | - | - | 214,200 | - | 34,580 | 179,620 | - |
| CIVIL SERVICE COMMISSION..... | 113 | - | 113 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | - | - | - | - | 2,458 | - | 1,545 | 913 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 804 | 804 | - | - | 275,438 | 148,445 | 51,136 | 75,857 | - |
| NATIONAL SCIENCE FOUNDATION..... | 13,463 | 10,440 | 2,790 | 233 | 98,771 | 28,694 | 28,027 | 41,817 | 233 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 5 | 3 | 2 | - | 111 | 7 | 35 | 69 | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | 4,560 | 4,560 | - | - | - |
| VETERANS ADMINISTRATION..... | 600 | 540 | 60 | - | 125 | - | 75 | 50 | - |

TABLE C-39. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|--|---------------|-------------|------------------|------------------------|-------------------|------------------------|---------------|--------------|----------------|------------------------------|
| | TOTAL | BIO-LOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOS- PHERIC | GEO- LOGICAL | OCEAN- OGRAPHY | ENVIRON- MENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 576,041 | 427,535 | 31,683 | 112,333 | 4,490 | 352,380 | 173,129 | 124,308 | 54,565 | 378 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 75,667 | 74,553 | 1,050 | 64 | - | 1,573 | 637 | 936 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 49,529 | 49,465 | - | 64 | - | 276 | 68 | 208 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 15,954 | 14,904 | 1,050 | - | - | 133 | 133 | - | - | - |
| FOREST SERVICE..... | 10,184 | 10,184 | - | - | - | 1,164 | 436 | 728 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 6,943 | 6,943 | - | - | - | 11,571 | 8,415 | 2,314 | 842 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 6,943 | 6,943 | - | - | - | 11,571 | 8,415 | 2,314 | 842 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 28,886 | 12,211 | 16,675 | - | - | 49,329 | 23,664 | 3,949 | 21,716 | - |
| DEPARTMENT OF THE ARMY..... | 16,923 | 5,696 | 11,227 | - | - | 4,379 | 3,119 | 1,040 | 220 | - |
| DEPARTMENT OF THE NAVY..... | 9,763 | 4,315 | 5,448 | - | - | 27,081 | 4,239 | 1,346 | 21,496 | - |
| DEPARTMENT OF THE AIR FORCE..... | 2,200 | 2,200 | - | - | - | 17,869 | 16,306 | 1,563 | - | - |
| DEFENSE AGENCIES..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT-WIDE FUNDS..... | - | - | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 300,257 | 182,180 | 7,891 | 110,186 | - | 165 | - | - | - | 165 |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 23,142 | 15,251 | 7,891 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 277,115 | 166,929 | - | 110,186 | - | 165 | - | - | - | 165 |
| OFFICE OF CHILD DEVELOPMENT..... | - | - | - | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 8,886 | 8,882 | - | - | 4 | 29,183 | 40 | 28,129 | 1,000 | 14 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 15 | 15 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 173 | - | 173 | - | - |
| BUREAU OF RECLAMATION..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 12 | 12 | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 8,459 | 8,459 | - | - | - | 28,146 | - | 27,154 | 992 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 400 | 396 | - | - | 4 | 864 | 40 | 802 | 8 | 14 |
| OFFICE OF WATER RESOURCES RESEARCH..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | - | - | - | - | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | - | - | - | - | - | 11,130 | - | 50 | 11,080 | - |
| FEDERAL AVIATION ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | - | 11,080 | - | - | 11,080 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | 50 | - | 50 | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 37,599 | 37,599 | - | - | - | 561 | 452 | - | - | 109 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 2,254 | 1,471 | - | 783 | - | 195,218 | 116,938 | 78,040 | 240 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 50,509 | 47,687 | 2,822 | 1,000 | 4,486 | 53,031 | 22,973 | 10,288 | 19,680 | 90 |
| NATIONAL SCIENCE FOUNDATION..... | 52,662 | 47,176 | - | - | - | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 114 | 69 | 45 | - | - | 33 | 10 | 16 | 7 | - |

TABLE C-40. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|--|---------------|-------------|------------------|------------------------|-------------------|------------------------|-------------|------------|--------------|----------------------------|
| | TOTAL | BIO-LOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOSPHERIC | GEOLOGICAL | OCEANOGRAPHY | ENVIRONMENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 631,159 | 456,290 | 33,940 | 135,148 | 5,781 | 361,592 | 172,838 | 121,851 | 61,622 | 5,281 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 81,095 | 79,864 | 1,152 | 79 | - | 1,682 | 681 | 1,001 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 52,665 | 52,586 | - | 79 | - | 293 | 72 | 221 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 17,513 | 16,361 | 1,152 | - | - | 141 | 141 | - | - | - |
| FOREST SERVICE..... | 10,917 | 10,917 | - | - | - | 1,248 | 468 | 780 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 9,256 | 9,256 | - | - | - | 15,426 | 11,219 | 3,085 | 1,122 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 9,256 | 9,256 | - | - | - | 15,426 | 11,219 | 3,085 | 1,122 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 27,999 | 12,674 | 15,325 | - | - | 55,791 | 26,352 | 4,703 | 24,736 | - |
| DEPARTMENT OF THE ARMY..... | 16,084 | 6,238 | 9,846 | - | - | 4,964 | 3,196 | 1,148 | 620 | - |
| DEPARTMENT OF THE NAVY..... | 10,215 | 4,736 | 5,479 | - | - | 29,999 | 4,437 | 1,446 | 24,116 | - |
| DEPARTMENT OF THE AIR FORCE..... | 1,700 | 1,700 | - | - | - | 20,828 | 18,719 | 2,109 | - | - |
| DEFENSE AGENCIES..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT-WIDE FUNDS..... | - | - | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 347,629 | 203,294 | 11,349 | 132,986 | - | 199 | - | - | - | 199 |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 25,702 | 14,353 | 11,349 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 321,927 | 188,941 | - | 132,986 | - | 199 | - | - | - | 199 |
| OFFICE OF CHILD DEVELOPMENT..... | - | - | - | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 10,024 | 10,020 | - | - | 4 | 28,964 | 46 | 27,876 | 1,027 | 15 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 206 | - | 206 | - | - |
| BUREAU OF RECLAMATION..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 12 | 12 | - | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 9,551 | 9,551 | - | - | - | 27,761 | - | 26,743 | 1,018 | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | 997 | 46 | 927 | 9 | 15 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 461 | 457 | - | - | 4 | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | - | - | - | - | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | - | - | - | - | - | 11,592 | - | 50 | 11,542 | - |
| FEDERAL AVIATION ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | - | 11,542 | - | - | 11,542 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | 50 | - | 50 | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 36,550 | 36,550 | - | - | - | - | 444 | - | - | 121 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 2,786 | 2,003 | - | 783 | - | 565 | 111,604 | 72,979 | 243 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 42,008 | 39,141 | 2,867 | 1,000 | 5,777 | 186,826 | 22,481 | 11,489 | 22,945 | 4,946 |
| NATIONAL SCIENCE FOUNDATION..... | 60,525 | 53,748 | - | - | - | 61,861 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | - | - | - | - | - | - | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | 121 | 74 | 47 | - | - | 35 | 11 | 17 | 7 | - |
| TENNESSEE VALLEY AUTHORITY..... | 8,606 | 8,606 | - | - | - | 651 | - | 651 | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | - | - | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 4,560 | 1,060 | 3,200 | 300 | - | - | - | - | - | - |

TABLE C-41. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|--|---------------|-------------|------------------|------------------------|-------------------|------------------------|-------------|-------------|--------------|----------------------------|
| | TOTAL | BIO-LOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOSPHERIC | GEO-LOGICAL | OCEANOGRAPHY | ENVIRONMENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 735,335 | 552,139 | 30,257 | 148,936 | 4,003 | 419,254 | 197,571 | 141,416 | 74,861 | 5,406 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 85,368 | 83,971 | 1,265 | 132 | - | 1,715 | 707 | 1,008 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 55,117 | 54,985 | - | 132 | - | 293 | 72 | 221 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 19,232 | 17,967 | 1,265 | - | - | 163 | 163 | - | - | - |
| FOREST SERVICE..... | 11,019 | 11,019 | - | - | - | 1,259 | 472 | 787 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 11,202 | 11,202 | - | - | - | 18,670 | 13,578 | 3,734 | 1,358 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 11,202 | 11,202 | - | - | - | 18,670 | 13,578 | 3,734 | 1,358 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 28,068 | 12,103 | 15,965 | - | - | 58,781 | 26,965 | 4,840 | 26,976 | - |
| DEPARTMENT OF THE ARMY..... | 15,617 | 5,446 | 10,171 | - | - | 5,321 | 3,452 | 1,149 | 720 | - |
| DEPARTMENT OF THE NAVY..... | 10,760 | 4,966 | 5,794 | - | - | 32,217 | 4,329 | 1,532 | 26,256 | - |
| DEPARTMENT OF THE AIR FORCE..... | 1,691 | 1,691 | - | - | - | 21,243 | 19,184 | 2,059 | - | - |
| DEFENSE AGENCIES..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT-WIDE FUNDS..... | - | - | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 375,961 | 223,492 | 8,343 | 144,126 | - | 228 | - | - | - | 228 |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 25,709 | 17,366 | 8,343 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 350,252 | 206,126 | - | 144,126 | - | 228 | - | - | - | 228 |
| OFFICE OF CHILD DEVELOPMENT..... | - | - | - | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 10,243 | 10,240 | - | - | 3 | 29,430 | 53 | 28,182 | 1,177 | 18 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 56 | - | 56 | - | - |
| BUREAU OF RECLAMATION..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 2 | 2 | - | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 9,712 | 9,712 | - | - | - | 28,287 | - | 27,122 | 1,165 | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 529 | 526 | - | - | 3 | 1,087 | 53 | 1,004 | 12 | 18 |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | - | - | - | - | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | - | - | - | - | - | 12,033 | - | 50 | 11,983 | - |
| FEDERAL AVIATION ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | - | 11,983 | - | - | 11,983 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | 50 | - | 50 | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 35,927 | 35,927 | - | - | - | - | 444 | - | - | 160 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 5,234 | 2,251 | - | 2,983 | - | - | 130,812 | 91,045 | 214 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN... | 89,869 | 87,242 | 1,232 | 1,395 | - | 222,071 | 25,000 | 11,839 | 33,145 | 5,000 |
| NATIONAL SCIENCE FOUNDATION..... | 74,648 | 70,648 | - | - | 4,000 | 74,984 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 132 | 80 | 52 | - | - | 38 | 12 | 18 | 8 | - |
| SMITHSONIAN INSTITUTION..... | 13,928 | 13,928 | - | 700 | - | 700 | - | 700 | - | - |
| TENNESSEE VALLEY AUTHORITY..... | - | - | - | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | - | - | - | - | - | - | - | - | - | - |

TABLE C-42. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE,
FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AERO- NAUTICAL | ASTRO- NAUTICAL | CHEMICAL | CIVIL | ELEC- TRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGI- NEERING NEC |
|---|---------|-------------------|--------------------|----------|-------|-----------------|------------|--------------------------------|-------------------------|
| TOTAL, ALL AGENCIES..... | 242,641 | 58,720 | 16,975 | 8,925 | 7,634 | 35,236 | 42,972 | 53,441 | 18,738 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 10,292 | - | - | 2,434 | 1,087 | 33 | 466 | - | 6,272 |
| AGRICULTURAL RESEARCH SERVICE..... | 8,042 | - | - | 2,289 | 795 | 33 | 321 | - | 4,604 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 795 | - | - | - | - | - | - | - | 795 |
| FOREST SERVICE..... | 1,455 | - | - | 145 | 292 | - | 145 | - | 873 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 3,887 | 125 | - | - | 97 | 1,193 | 517 | 1,537 | 418 |
| NATIONAL BUREAU OF STANDARDS..... | 2,835 | 125 | - | - | 97 | 562 | 96 | 1,537 | 418 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 1,052 | - | - | - | - | 631 | 421 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 58,753 | 566 | 6,081 | 1,039 | 782 | 13,623 | 14,298 | 20,309 | 2,055 |
| DEPARTMENT OF THE ARMY..... | 9,552 | - | - | 25 | 782 | 2,641 | 1,767 | 2,282 | 2,055 |
| DEPARTMENT OF THE NAVY..... | 11,408 | 566 | - | 1,014 | - | - | 3,415 | 6,413 | - |
| DEPARTMENT OF THE AIR FORCE..... | 25,736 | - | 6,081 | - | - | 7,901 | 9,116 | 2,638 | - |
| DEFENSE AGENCIES..... | 12,057 | - | - | - | - | 3,081 | - | 8,976 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 2,287 | - | - | - | - | 61 | - | - | 2,226 |
| NATIONAL INSTITUTES OF HEALTH..... | 2,287 | - | - | - | - | 61 | - | - | 2,226 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 2,313 | - | - | 82 | 248 | 30 | 20 | 1,783 | 150 |
| BUREAU OF MINES..... | 1,835 | - | - | 52 | - | - | - | 1,783 | - |
| BUREAU OF RECLAMATION..... | 39 | - | - | - | 19 | 20 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 439 | - | - | 30 | 229 | 10 | 20 | - | 150 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 8,797 | - | - | 380 | 2,625 | 413 | 1,962 | 1,375 | 2,042 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 7,020 | - | - | 380 | 2,310 | 393 | 700 | 1,355 | 1,882 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 1,127 | - | - | - | - | - | 1,127 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 650 | - | - | - | 315 | 20 | 135 | 20 | 160 |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 12,325 | - | - | 239 | - | - | - | 12,086 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 132 | - | 82 | - | - | - | 50 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 121,999 | 57,493 | 10,796 | 925 | 43 | 14,914 | 21,832 | 13,595 | 2,401 |
| NATIONAL SCIENCE FOUNDATION..... | 21,669 | 520 | - | 3,810 | 2,736 | 4,953 | 3,811 | 2,740 | 3,099 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 112 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | - |
| VETERANS ADMINISTRATION..... | 75 | - | - | - | - | - | - | - | 75 |

TABLE C-43. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE,
FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AERO- NAUTICAL | ASTRO- NAUTICAL | CHEMICAL | CIVIL | ELEC- TRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGI- NEERING NEC |
|---|--------------|-------------------|--------------------|----------|----------|-----------------|--------------|--------------------------------|-------------------------|
| TOTAL, ALL AGENCIES..... | 239,695 | 59,552 | 14,930 | 8,753 | 6,958 | 35,041 | 39,958 | 52,883 | 21,620 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 10,760 | - | - | 2,380 | 1,154 | 18 | 497 | - | 6,711 |
| AGRICULTURAL RESEARCH SERVICE..... | 8,329 | - | - | 2,224 | 843 | 18 | 341 | - | 4,903 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 872 | - | - | - | - | - | - | - | 872 |
| FOREST SERVICE..... | 1,559 | - | - | 156 | 311 | - | 156 | - | 936 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 4,935 | 130 | - | - | 101 | 2,004 | 660 | 1,605 | 435 |
| NATIONAL BUREAU OF STANDARDS..... | 2,958 | 130 | - | - | 101 | 587 | 100 | 1,605 | 435 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | 1,401 576 | - - | - - | - - | - - | 841 576 | 560 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 60,577 | 1,700 | 6,180 | 1,050 | 936 | 12,194 | 13,100 | 23,357 | 2,060 |
| DEPARTMENT OF THE ARMY..... | 10,325 | 600 | - | 120 | 936 | 2,792 | 1,520 | 2,297 | 2,060 |
| DEPARTMENT OF THE NAVY..... | 12,373 | 1,100 | - | 930 | - | - | 3,244 | 7,099 | - |
| DEPARTMENT OF THE AIR FORCE..... | 26,844 | - | 6,180 | - | - | 8,444 | 8,336 | 3,884 | - |
| DEFENSE AGENCIES..... | 11,035 | - | - | - | - | 958 | - | 10,077 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 2,764 | - | - | - | - | 72 | - | - | 2,692 |
| NATIONAL INSTITUTES OF HEALTH..... | 2,764 | - | - | - | - | 72 | - | - | 2,692 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 2,801 | - | - | 92 | 271 | 29 | 22 | 2,216 | 171 |
| BUREAU OF MINES..... | 2,272 | - | - | 58 | - | - | - | 2,214 | - |
| BUREAU OF RECLAMATION..... | 32 | - | - | - | 12 | 20 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 497 | - | - | 34 | 259 | 9 | 22 | 2 | 171 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 7,870 | - | - | 330 | 2,329 | 363 | 1,847 | 1,201 | 1,800 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 6,120 | - | - | 330 | 2,014 | 343 | 612 | 1,181 | 1,640 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. URBAN MASS TRANSPORTATION ADMIN..... | 1,100 650 | - - | - - | - - | - 315 | - 20 | 1,100 135 | - 20 | - 160 |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 12,179 | - | - | 229 | - | - | - | 11,950 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 130 | - | 81 | - | - | - | 49 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 112,393 | 56,035 | 8,652 | 805 | - | 12,930 | 21,016 | 10,940 | 2,015 |
| NATIONAL SCIENCE FOUNDATION..... | 25,002 | 1,670 | - | 3,850 | 2,150 | 7,414 | 2,750 | 1,597 | 5,651 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 119 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | - |
| VETERANS ADMINISTRATION..... | 85 | - | - | - | - | - | - | - | 85 |

TABLE C-44. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE,
FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AERO- NAUTICAL | ASTRO- NAUTICAL | CHEMICAL | CIVIL | ELEC- TRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGI- NEERING NEC |
|--|----------------|-------------------|--------------------|----------|----------|-----------------|--------------|--------------------------------|-------------------------|
| TOTAL, ALL AGENCIES..... | 247,992 | 51,096 | 14,307 | 11,693 | 17,633 | 33,803 | 41,840 | 53,150 | 24,470 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 10,855 | - | - | 2,270 | 1,158 | 18 | 489 | - | 6,920 |
| AGRICULTURAL RESEARCH SERVICE..... | 8,323 | - | - | 2,113 | 842 | 18 | 332 | - | 5,018 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 958 | - | - | - | - | - | - | - | 958 |
| FOREST SERVICE..... | 1,574 | - | - | 157 | 316 | - | 157 | - | 944 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 6,524 | 130 | - | - | 101 | 3,475 | 779 | 1,604 | 435 |
| NATIONAL BUREAU OF STANDARDS..... | 2,956 | 130 | - | - | 101 | 586 | 100 | 1,604 | 435 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | 1,697 1,871 | - - | - - | - - | - - | 1,018 1,871 | 679 - | - - | - - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 64,414 | 2,191 | 6,303 | 1,175 | 938 | 13,566 | 13,008 | 25,073 | 2,160 |
| DEPARTMENT OF THE ARMY..... | 11,161 | 1,061 | 90 | - | 938 | 3,521 | 1,138 | 2,253 | 2,160 |
| DEPARTMENT OF THE NAVY..... | 13,190 | 1,130 | - | 1,175 | - | - | 3,393 | 7,492 | - |
| DEPARTMENT OF THE AIR FORCE..... | 27,103 | - | 6,213 | - | - | 8,585 | 8,477 | 3,828 | - |
| DEFENSE AGENCIES..... | 12,960 | - | - | - | - | 1,460 | - | 11,500 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 3,155 | - | - | - | - | 82 | - | - | 3,073 |
| NATIONAL INSTITUTES OF HEALTH..... | 3,155 | - | - | - | - | 82 | - | - | 3,073 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,249 | - | - | 96 | 405 | 39 | 30 | 487 | 192 |
| BUREAU OF MINES..... | 637 | - | - | 56 | 98 | - | - | 483 | - |
| BUREAU OF RECLAMATION..... | 28 | - | - | - | 8 | 20 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 584 | - | - | 40 | 299 | 19 | 30 | 4 | 192 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 9,714 | - | - | 387 | 2,672 | 421 | 2,751 | 1,403 | 2,080 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 7,164 | - | - | 387 | 2,357 | 401 | 716 | 1,383 | 1,920 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. URBAN MASS TRANSPORTATION ADMIN..... | 1,900 650 | - - | - - | - - | - 315 | - 20 | 1,900 135 | - 20 | - 160 |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 11,432 | - | - | 212 | - | - | - | 11,220 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 130 | - | 81 | - | - | - | 49 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 98,189 | 46,166 | 7,904 | 834 | - | 12,524 | 19,926 | 10,835 | - |
| NATIONAL SCIENCE FOUNDATION..... | 42,115 | 2,590 | - | 6,700 | 12,340 | 3,660 | 4,790 | 2,510 | 9,525 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 130 | 19 | 19 | 19 | 19 | 18 | 18 | 18 | - |
| VETERANS ADMINISTRATION..... | 85 | - | - | - | - | - | - | - | 85 |

TABLE C-45. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE,
FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|--|--------|-------------------|-----------|---------|------------------|----------------------|-----------|---------------------------|
| TOTAL, ALL AGENCIES..... | 66,118 | 8,050 | 25,936 | 4,424 | 1,811 | 3,759 | 13,122 | 9,016 |
| DEPARTMENTS | 10,069 | - | 9,389 | 43 | - | 43 | 497 | 97 |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 210 | - | 192 | - | - | - | 8 | 10 |
| AGRICULTURAL RESEARCH SERVICE..... | 5,158 | - | 4,885 | - | - | - | 273 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 4,322 | - | 3,933 | 43 | - | 43 | 216 | 87 |
| ECONOMIC RESEARCH SERVICE..... | 221 | - | 221 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 145 | - | 145 | - | - | - | - | - |
| FOREST SERVICE..... | 13 | - | 13 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 4,367 | - | 4,367 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 21 | - | 21 | - | - | - | - | - |
| BUREAU OF THE CENSUS..... | 841 | - | 841 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF BUSINESS ECONOMICS..... | 3,505 | - | 3,505 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,815 | - | - | - | 111 | 1,401 | 303 | - |
| DEPARTMENT OF THE ARMY..... | 613 | - | - | - | - | 310 | 303 | - |
| DEPARTMENT OF THE AIR FORCE..... | 200 | - | - | - | - | 200 | - | - |
| DEFENSE AGENCIES..... | 1,002 | - | - | - | 111 | 891 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 22,528 | 1,654 | 5,216 | - | 404 | 511 | 9,060 | 5,683 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 15,790 | 1,533 | 5,098 | - | - | 511 | 8,648 | - |
| NATIONAL INSTITUTES OF HEALTH..... | 823 | 121 | 118 | - | 149 | - | 412 | 23 |
| OFFICE OF EDUCATION..... | 5,512 | - | - | - | 255 | - | - | 5,257 |
| SOCIAL SECURITY ADMINISTRATION..... | 403 | - | - | - | - | - | - | 403 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 350 | - | 225 | - | - | 45 | 45 | 35 |
| BUREAU OF RECLAMATION..... | 31 | - | 31 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 319 | - | 194 | - | - | 45 | 45 | 35 |
| DEPARTMENT OF LABOR, TOTAL..... | 2,052 | - | 2,052 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 1,422 | - | 1,422 | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 290 | - | 290 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 340 | - | 340 | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 1,107 | - | 512 | - | - | 100 | 275 | 220 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 370 | - | 145 | - | - | - | 225 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 737 | - | 367 | - | - | 100 | 50 | 220 |
| OTHER AGENCIES | 2 | - | 2 | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 1,230 | - | 61 | - | - | - | - | 1,169 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 14,234 | 3,227 | 4,111 | 924 | 1,296 | 1,554 | 1,311 | 1,811 |
| NATIONAL SCIENCE FOUNDATION..... | 1,600 | - | - | - | - | - | 1,600 | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 7 | 1 | 1 | 1 | - | 2 | 1 | 1 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 6,727 | 3,148 | - | 3,456 | - | 103 | - | - |
| SMITHSONIAN INSTITUTION..... | 30 | - | - | - | - | - | 30 | - |
| VETERANS ADMINISTRATION..... | | | | | | | | |

TABLE C-46. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|---|----------------|-------------------|----------------|---------|------------------|----------------------|---------------|---------------------------|
| TOTAL, ALL AGENCIES..... | 81,421 | 9,248 | 30,395 | 4,878 | 1,797 | 3,405 | 16,750 | 14,948 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 10,825 | - | 10,098 | 46 | - | 45 | 536 | 100 |
| AGRICULTURAL RESEARCH SERVICE..... | 209 | - | 191 | - | - | - | 8 | 10 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 5,661 | - | 5,361 | - | - | - | 300 | - |
| ECONOMIC RESEARCH SERVICE..... | 4,550 | - | 4,141 | 46 | - | 45 | 228 | 90 |
| FARMER COOPERATIVE SERVICE..... | 236 | - | 236 | - | - | - | - | - |
| FOREST SERVICE..... | 156 | - | 156 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 13 | - | 13 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 5,154 | - | 5,154 | - | - | - | - | - |
| BUREAU OF THE CENSUS..... | 25 | - | 25 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF BUSINESS ECONOMICS..... | 1,125 4,004 | - - | 1,125 4,004 | - - | - - | - - | - - | - - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 2,116 | 140 | 100 | - | 366 | 860 | 350 | 300 |
| DEPARTMENT OF THE ARMY..... | 697 | 140 | 100 | - | - | 107 | 350 | - |
| DEPARTMENT OF THE AIR FORCE..... | 300 | - | - | - | - | - | - | 300 |
| DEFENSE AGENCIES..... | 1,119 | - | - | - | 366 | 753 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 30,254 | 1,842 | 7,026 | - | 180 | 692 | 11,318 | 9,196 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. NATIONAL INSTITUTES OF HEALTH..... | 20,102 983 | 1,698 144 | 6,898 128 | - - | - 180 | 692 - | 10,814 504 | - 27 |
| OFFICE OF EDUCATION..... | 8,744 | - | - | - | - | - | - | 8,744 |
| SOCIAL SECURITY ADMINISTRATION..... | 425 | - | - | - | - | - | - | 425 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 366 | - | 217 | - | - | 52 | 53 | 44 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 366 | - | 217 | - | - | 52 | 53 | 44 |
| DEPARTMENT OF LABOR, TOTAL..... | 2,578 | - | 2,578 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 1,461 | - | 1,461 | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 720 | - | 720 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 397 | - | 397 | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 1,080 | - | 504 | - | - | 100 | 256 | 220 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 343 | - | 137 | - | - | - | 206 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 737 | - | 367 | - | - | 100 | 50 | 220 |
| OTHER AGENCIES | | | | | | | | |
| ENVIRONMENTAL PROTECTION AGENCY..... | 2 | - | 2 | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 19,074 | 3,666 | 4,715 | 900 | 1,251 | 1,654 | 1,801 | 5,087 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 2,400 | - | - | - | - | - | 2,400 | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 8 | 1 | 1 | 2 | - | 2 | 1 | 1 |
| SMITHSONIAN INSTITUTION..... | 7,529 | 3,599 | - | 3,930 | - | - | - | - |
| VETERANS ADMINISTRATION..... | 35 | - | - | - | - | - | 35 | - |

TABLE C-47. FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|---|-----------------|-------------------|----------------|---------|------------------|----------------------|---------------|---------------------------|
| TOTAL, ALL AGENCIES..... | 99,851 | 11,462 | 33,538 | 5,051 | 2,250 | 4,278 | 20,505 | 22,767 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 11,307 | - | 10,557 | 45 | - | 45 | 561 | 99 |
| AGRICULTURAL RESEARCH SERVICE..... | 209 | - | 191 | - | - | - | 8 | 10 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 6,218 | - | 5,889 | - | - | - | 329 | - |
| ECONOMIC RESEARCH SERVICE..... | 4,474 | - | 4,071 | 45 | - | 45 | 224 | 89 |
| FARMER COOPERATIVE SERVICE..... | 236 | - | 236 | - | - | - | - | - |
| FOREST SERVICE..... | 157 | - | 157 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 13 | - | 13 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 5,891 | - | 5,891 | - | - | - | - | - |
| BUREAU OF THE CENSUS..... | 26 | - | 26 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF BUSINESS ECONOMICS..... | 1,357 4,508 | - - | 1,357 4,508 | - - | - - | - - | - - | - - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,793 | - | - | - | 420 | 840 | 230 | 303 |
| DEPARTMENT OF THE ARMY..... | 730 | - | - | - | 100 | 400 | 230 | - |
| DEPARTMENT OF THE AIR FORCE..... | 303 | - | - | - | - | - | - | 303 |
| DEFENSE AGENCIES..... | 760 | - | - | - | 320 | 440 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 30,378 | 1,902 | 7,500 | - | 330 | 738 | 11,577 | 8,331 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. NATIONAL INSTITUTES OF HEALTH..... | 20,838 1,115 | 1,738 164 | 7,360 140 | - - | - 205 | 738 - | 11,002 575 | - 31 |
| OFFICE OF EDUCATION..... | 7,945 | - | - | - | 125 | - | - | 7,820 |
| SOCIAL SECURITY ADMINISTRATION..... | 480 | - | - | - | - | - | - | 480 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 432 | - | 248 | 5 | - | 72 | 61 | 46 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 432 | - | 248 | 5 | - | 72 | 61 | 46 |
| DEPARTMENT OF LABOR, TOTAL..... | 2,712 | - | 2,712 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 1,463 | - | 1,463 | - | - | - | - | - |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 812 | - | 812 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 437 | - | 437 | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 1,137 | - | 527 | - | - | 100 | 290 | 220 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 400 | - | 160 | - | - | - | 240 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 737 | - | 367 | - | - | 100 | 50 | 220 |
| OTHER AGENCIES | | | | | | | | |
| ENVIRONMENTAL PROTECTION AGENCY..... | 2 | - | 2 | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 32,597 | 5,500 | 6,100 | 1,000 | 1,500 | 2,480 | 2,250 | 13,767 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 5,500 | - | - | - | - | - | 5,500 | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 8 | 1 | 1 | 1 | - | 3 | 1 | 1 |
| SMITHSONIAN INSTITUTION..... | 8,059 | 4,059 | - | 4,000 | - | - | - | - |
| VETERANS ADMINISTRATION..... | 35 | - | - | - | - | - | 35 | - |

TABLE C-48. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|--|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|--------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 3,539,650 | 1,374,509 | 1,003,980 | 42,987 | 633,212 | 149,761 | 208,397 | 41,534 | 68,123 | 17,147 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 156,216 | 114,655 | 417 | - | 38,945 | - | 643 | - | 4 | 1,552 |
| AGRICULTURAL RESEARCH SERVICE..... | 79,126 | 74,617 | 223 | - | 2,277 | - | 457 | - | - | 1,552 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 37,852 | 1,290 | - | - | 36,376 | - | 186 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 10,562 | 10,424 | 6 | - | 148 | - | - | - | 4 | - |
| FARMER COOPERATIVE SERVICE..... | 663 | 644 | - | - | 19 | - | - | - | - | - |
| FOREST SERVICE..... | 27,385 | 27,292 | 6 | - | 87 | - | - | - | - | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 208 | 107 | 93 | - | 8 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 400 | 281 | 89 | - | 30 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 54,913 | 40,301 | 6,355 | - | 2,137 | - | 476 | 3 | 5,235 | 406 |
| BUREAU OF THE CENSUS..... | 1,357 | 1,357 | - | - | - | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION... | 3,809 | 524 | 911 | - | 344 | - | 157 | - | 1,873 | - |
| MARITIME ADMINISTRATION..... | 4,878 | 515 | 4,169 | - | 194 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 12,705 | 12,294 | - | - | 5 | - | - | - | - | 406 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. PATENT OFFICE..... | 31,877 | 25,327 | 1,275 | - | 1,594 | - | 319 | - | 3,362 | - |
| | 287 | 284 | - | - | - | - | - | 3 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,310,113 | 486,575 | 659,350 | 3,853 | 65,073 | 38,493 | 26,858 | 26,238 | 447 | 3,226 |
| DEPARTMENT OF THE ARMY..... | 246,085 | 184,532 | 40,877 | - | 10,140 | 2,951 | 2,659 | 3,795 | 447 | 684 |
| DEPARTMENT OF THE NAVY..... | 190,978 | 126,722 | 37,843 | - | 8,622 | 14,350 | 3,397 | 44 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 584,000 | 95,179 | 443,672 | - | 31,627 | 200 | 12,951 | - | - | 371 |
| DEFENSE AGENCIES..... | 284,959 | 79,573 | 135,555 | 3,734 | 14,304 | 20,972 | 6,787 | 21,863 | - | 2,171 |
| DEPARTMENT-WIDE FUNDS..... | 4,091 | 569 | 1,403 | 119 | 380 | 20 | 1,064 | 536 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 741,331 | 122,047 | 37,133 | - | 400,982 | 3,333 | 129,449 | 2,483 | 36,863 | 9,041 |
| FOOD AND DRUG ADMINISTRATION..... | 21,805 | 13,350 | 175 | - | 4,633 | - | 1,007 | - | 2,164 | 476 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 100,018 | 24,940 | 2,972 | - | 39,146 | - | 14,896 | - | 15,326 | 2,738 |
| NATIONAL INSTITUTES OF HEALTH..... | 549,403 | 70,112 | 33,130 | - | 330,308 | - | 98,048 | 553 | 13,379 | 3,873 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | 50 | - | - | 950 | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 25,254 | 953 | 720 | - | 10,121 | 3,333 | 6,769 | 1,930 | 1,415 | 13 |
| SOCIAL AND REHABILITATION SERVICE..... | 31,885 | 998 | - | - | 15,673 | - | 8,694 | - | 4,579 | 1,941 |
| SOCIAL SECURITY ADMINISTRATION..... | 11,966 | 11,644 | 136 | - | 151 | - | 35 | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP... | 7,097 | 50 | 5,628 | - | - | - | 1,064 | - | 355 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 71,769 | 45,923 | 7,329 | 375 | 12,520 | - | 1,195 | 97 | 4,330 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 524 | 134 | 305 | - | 85 | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 695 | 350 | - | - | 318 | - | - | - | 27 | - |
| BUREAU OF MINES..... | 27,646 | 26,213 | - | - | 1,042 | - | 172 | 97 | 122 | - |

| DEPARTMENT OF AGRICULTURE, TOTAL..... | | | | | | | | | | |
|--|-----------|---------|---------|-------|---------|--------|---------|--------|--------|-------|
| AGRICULTURAL RESEARCH SERVICE..... | 156,216 | 114,655 | 417 | - | 38,945 | - | 643 | - | 4 | 1,552 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 79,126 | 74,617 | 223 | - | 2,277 | - | 457 | - | - | 1,552 |
| ECONOMIC RESEARCH SERVICE..... | 37,852 | 1,290 | - | - | 36,376 | - | 186 | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 10,582 | 10,424 | 6 | - | 148 | - | - | - | 4 | - |
| FOREST SERVICE..... | 663 | 644 | - | - | 19 | - | - | - | - | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 27,385 | 27,292 | 6 | - | 87 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 208 | 107 | 93 | - | 8 | - | - | - | - | - |
| | 400 | 281 | 89 | - | 30 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 54,913 | 40,301 | 6,355 | - | 2,137 | - | 476 | 3 | 5,235 | 406 |
| BUREAU OF THE CENSUS..... | 1,357 | 1,357 | - | - | - | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 3,809 | 524 | 911 | - | 344 | - | 157 | - | 1,873 | - |
| MARITIME ADMINISTRATION..... | 4,878 | 515 | 4,169 | - | 194 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 12,705 | 12,294 | - | - | 5 | - | - | - | - | 406 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. PATENT OFFICE..... | 31,877 | 25,327 | 1,275 | - | 1,594 | - | 319 | - | 3,362 | - |
| | 287 | 284 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,310,113 | 486,575 | 659,350 | 3,853 | 65,073 | 38,493 | 26,858 | 26,238 | 447 | 3,226 |
| DEPARTMENT OF THE ARMY..... | 246,085 | 184,532 | 40,877 | - | 10,140 | 2,951 | 2,659 | 3,795 | 447 | 684 |
| DEPARTMENT OF THE NAVY..... | 190,978 | 126,722 | 37,843 | - | 8,622 | 14,350 | 3,397 | 44 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 584,000 | 95,179 | 443,672 | - | 31,627 | 200 | 12,951 | - | - | 371 |
| DEFENSE AGENCIES..... | 284,959 | 79,573 | 135,555 | 3,734 | 14,304 | 20,972 | 6,787 | 21,863 | - | 2,171 |
| DEPARTMENT-WIDE FUNDS..... | 4,091 | 569 | 1,403 | 119 | 380 | 20 | 1,064 | 536 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 741,331 | 122,047 | 37,133 | - | 400,982 | 3,333 | 129,449 | 2,483 | 36,863 | 9,041 |
| FOOD AND DRUG ADMINISTRATION..... | 21,805 | 13,350 | 175 | - | 4,633 | - | 1,007 | - | 2,164 | 476 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 100,018 | 24,940 | 2,972 | - | 39,146 | - | 14,896 | - | 15,326 | 2,738 |
| NATIONAL INSTITUTES OF HEALTH..... | 549,403 | 70,112 | 33,130 | - | 330,308 | - | 98,048 | 553 | 13,379 | 3,873 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | 50 | - | - | 950 | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 25,254 | 953 | 720 | - | 10,121 | 3,333 | 6,769 | 1,930 | 1,415 | 13 |
| SOCIAL AND REHABILITATION SERVICE..... | 31,885 | 998 | - | - | 15,673 | - | 8,694 | - | 4,579 | 1,941 |
| SOCIAL SECURITY ADMINISTRATION..... | 11,966 | 11,644 | 136 | - | 151 | - | 35 | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 7,097 | 50 | 5,628 | - | - | - | 1,064 | - | 355 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 71,769 | 45,923 | 7,329 | 375 | 12,520 | - | 1,195 | 97 | 4,330 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 524 | 134 | 305 | - | 85 | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 695 | 350 | - | - | 318 | - | - | - | 27 | - |
| BUREAU OF MINES..... | 27,646 | 26,213 | - | - | 1,042 | - | 172 | 97 | 122 | - |
| BUREAU OF OUTDOOR RECREATION..... | 92 | 52 | - | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 7,120 | 2,695 | 944 | - | 3,226 | - | - | - | 255 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.. | 9,582 | 5,732 | - | - | 72 | - | - | - | 3,778 | - |
| GEOLOGICAL SURVEY..... | 10,296 | 9,677 | 368 | - | 251 | - | - | - | - | - |
| OFFICE OF COAL RESEARCH..... | 2,341 | 300 | 1,291 | - | 300 | - | 450 | - | - | - |
| OFFICE OF SALINE WATER..... | 5,001 | 224 | 3,946 | 375 | - | - | 456 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 8,472 | 506 | 475 | - | 7,226 | - | 117 | - | 148 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 5,334 | 301 | 825 | - | 1,842 | - | 331 | - | 2,035 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS LAW ENFORCEMENT ASSISTANCE ADMIN..... | 839 | 25 | - | - | 483 | - | 331 | - | - | - |
| | 4,495 | 276 | 825 | - | 1,359 | - | - | - | 2,035 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 9,234 | 4,652 | 587 | - | 1,469 | - | 1,704 | - | 822 | - |
| BUREAU OF LABOR STATISTICS..... | 1,144 | 1,144 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 5,874 | 1,292 | 587 | - | 1,469 | - | 1,704 | - | 822 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,216 | 2,216 | - | - | - | - | - | - | - | - |

CONTINUED ON NEXT PAGE

TABLE C-48. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

CONTINUED

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN | |
|---|---------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|-------|---------|-------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | | |
| POSTAL SERVICE..... | 4,577 | 1,634 | 2,117 | - | 29 | - | - | 3 | 794 | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 18,895 | 4,771 | 50 | - | 5,258 | - | - | 8,078 | - | 49 | 689 |
| DEPARTMENTAL FUNDS..... | 125 | 52 | - | - | 26 | - | - | 3 | - | 44 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 18,627 | 4,648 | - | - | 5,232 | - | - | 8,058 | - | - | 689 |
| PEACE CORPS..... | 143 | 71 | 50 | - | - | - | - | 17 | - | 5 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 67,164 | 19,500 | 15,904 | - | 8,486 | - | - | 7,936 | 222 | 15,116 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 9,960 | 9,227 | 14 | - | 719 | - | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 21,218 | 3,607 | 2,971 | - | - | - | - | 1,694 | - | 12,946 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 4,743 | 850 | 3,409 | - | 235 | - | - | 85 | 164 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 14,765 | 1,365 | 3,639 | - | 4,986 | - | - | 2,839 | - | 1,936 | - |
| OFFICE OF THE SECRETARY..... | 8,956 | 2,260 | 5,230 | - | 852 | - | - | 422 | 58 | 134 | - |
| UNITED STATES COAST GUARD..... | 2,801 | 2,184 | 411 | - | 106 | - | - | 100 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 4,721 | 7 | 230 | - | 1,588 | - | - | 2,796 | - | 100 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 286 | 286 | - | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 286 | 286 | - | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 553 | 553 | - | 37,093 | 17,372 | - | 72,571 | 2,905 | - | - | - |
| ATOMIC ENERGY COMMISSION..... | 146,448 | 3,852 | 2,458 | - | - | - | - | - | 9,735 | - | 462 |
| CIVIL AERONAUTICS BOARD..... | 263 | 263 | - | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | 196 | 196 | - | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 47,534 | 18,686 | 10,233 | - | 10,360 | 219 | - | 4,776 | 197 | 2,422 | 641 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1,015 | 615 | 400 | - | 99 | - | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 390 | 291 | - | - | - | - | - | - | - | - | - |
| FEDERAL TRADE COMMISSION..... | 388 | 388 | - | - | - | - | - | - | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | 215 | 198 | - | - | - | - | - | 17 | - | - | - |
| LIBRARY OF CONGRESS..... | 968 | 925 | 43 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 772,698 | 440,961 | 243,378 | 1,666 | 35,957 | 33,480 | - | 15,420 | 706 | - | 1,130 |
| NATIONAL SCIENCE FOUNDATION..... | 29,812 | 1,500 | 1,815 | - | 22,298 | 1,665 | - | 1,800 | 719 | 15 | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 27,800 | 3,898 | 8,359 | - | 9,764 | - | - | 5,467 | 312 | - | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 1,016 | 620 | 321 | - | - | - | - | 75 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 557 | 557 | - | - | - | - | - | - | - | - | - |
| SMALL BUSINESS ADMINISTRATION..... | 101 | 10 | - | - | 91 | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 6,376 | 6,254 | - | - | 122 | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 3,732 | 2,233 | 1,171 | - | 100 | - | - | 200 | - | - | - |
| UNITED STATES INFORMATION AGENCY..... | 157 | 100 | 57 | - | - | - | - | - | 28 | - | - |
| VETERANS ADMINISTRATION..... | 52,502 | 51,714 | 50 | - | 308 | - | - | - | - | 430 | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-49. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|---|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|--------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 3,830,092 | 1,432,859 | 1,083,934 | 41,685 | 727,109 | 144,972 | 236,838 | 42,809 | 86,245 | 33,641 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 169,830 | 125,604 | 237 | - | 41,508 | - | 576 | - | - | 1,905 |
| AGRICULTURAL RESEARCH SERVICE..... | 86,420 | 82,900 | 107 | - | 1,227 | - | 273 | - | - | 1,905 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 41,539 | 1,421 | - | - | 39,915 | - | 203 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 11,138 | 10,996 | - | - | 142 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 709 | 634 | - | - | 75 | - | - | - | - | - |
| FOREST SERVICE..... | 29,355 | 29,265 | 5 | - | 85 | - | - | - | - | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 259 | 102 | 30 | - | 27 | - | 100 | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 410 | 278 | 95 | - | 37 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 78,416 | 52,361 | 18,627 | - | 2,939 | - | 501 | - | 3,624 | 364 |
| BUREAU OF THE CENSUS..... | 1,759 | 1,759 | - | - | - | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,844 | 664 | 659 | - | 446 | - | 75 | - | - | - |
| MARITIME ADMINISTRATION..... | 17,493 | 888 | 16,236 | - | 369 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 13,884 | 13,497 | 33 | - | - | - | - | - | - | 354 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | 42,497 | 34,614 | 1,699 | - | 2,124 | - | 426 | - | 3,624 | 10 |
| PATENT OFFICE..... | 484 | 484 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,236,296 | 456,727 | 628,200 | 2,612 | 56,276 | 31,857 | 31,539 | 27,384 | 30 | 1,671 |
| DEPARTMENT OF THE ARMY..... | 209,661 | 156,692 | 33,426 | - | 10,020 | 115 | 5,962 | 2,936 | 30 | 480 |
| DEPARTMENT OF THE NAVY..... | 182,960 | 122,697 | 34,423 | - | 9,744 | 12,483 | 3,613 | - | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 564,000 | 96,457 | 430,501 | - | 23,906 | 185 | 12,506 | - | - | 445 |
| DEFENSE AGENCIES..... | 276,123 | 80,463 | 128,598 | 2,352 | 12,151 | 19,034 | 8,596 | 24,183 | - | 746 |
| DEPARTMENT-WIDE FUNDS..... | 3,552 | 418 | 1,252 | 260 | 455 | 40 | 862 | 265 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 910,400 | 147,543 | 45,120 | - | 474,484 | 2,721 | 155,923 | 2,945 | 56,800 | 24,864 |
| FOOD AND DRUG ADMINISTRATION..... | 25,922 | 14,824 | 120 | - | 7,800 | - | 1,171 | - | - | 2,027 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. NATIONAL INSTITUTES OF HEALTH..... | 122,575 | 28,974 | 3,482 | - | 36,272 | - | 21,680 | - | 16,553 | 15,614 |
| OFFICE OF CHILD DEVELOPMENT..... | 658,338 | 88,672 | 39,825 | - | 392,292 | - | 117,368 | 666 | 15,757 | 3,758 |
| OFFICE OF EDUCATION..... | 2,000 | 100 | - | - | 1,900 | - | - | - | - | - |
| OFFICE OF RECLAMATION..... | 56,283 | 1,427 | 1,350 | - | 21,172 | 2,721 | 7,533 | 2,279 | 19,801 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 32,200 | 1,017 | - | - | 14,838 | - | 8,191 | - | 4,689 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 13,082 | 12,529 | 343 | - | 210 | - | - | - | - | 3,465 |
| DEPARTMENT OF HOUSING & URBAN DEVELOPMENT..... | 11,862 | 50 | 9,440 | - | - | - | 1,779 | - | 593 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 83,904 | 51,953 | 7,210 | 400 | 16,431 | - | 2,933 | - | 4,977 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 474 | 137 | 210 | - | 127 | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 755 | 407 | - | - | 308 | - | - | - | 40 | - |
| BUREAU OF MINES..... | 31,599 | 28,899 | - | - | 2,000 | - | 600 | - | 100 | - |
| BUREAU OF OUTDOOR RECREATION..... | 133 | 83 | - | - | 50 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 8,974 | 3,384 | 1,417 | - | 3,628 | - | - | - | 545 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 10,581 | 6,581 | - | - | 65 | - | - | - | 3,935 | - |
| GEOLOGICAL SURVEY..... | 12,815 | 11,500 | 564 | - | 631 | - | - | - | 120 | - |
| OFFICE OF COAL RESEARCH..... | 4,809 | 100 | 1,959 | - | 1,250 | - | 1,500 | - | - | - |
| OFFICE OF SALINE WATER..... | 3,400 | 200 | 1,900 | 400 | 500 | - | 400 | - | - | - |
| OFFICE OF THE SECRETARY..... | 583 | 33 | 400 | - | 150 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 9,781 | 629 | 760 | - | 7,722 | - | 433 | - | 237 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 6,210 | 327 | 1,266 | - | 1,819 | - | 521 | 157 | 2,120 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 1,560 | 39 | 421 | - | 422 | - | 521 | 157 | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 4,650 | 288 | 845 | - | 1,397 | - | - | - | 2,120 | - |

CONTINUED ON NEXT PAGE

TABLE C-49. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA- MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|---|---------|------------------------|-------------------------------|---|---------------------------------|---|--|--|--------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN. BY NON- PROFIT INSTI- TUTIONS | OTHER | |
| DEPARTMENT OF LABOR, TOTAL..... | 9,917 | 5,071 | 621 | - | 1,553 | - | 1,802 | - | 870 | - |
| BUREAU OF LABOR STATISTICS..... | 1,154 | 1,154 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,213 | 1,367 | 621 | - | 1,553 | - | 1,802 | - | 870 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,550 | 2,550 | - | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 5,568 | 1,670 | 3,225 | - | 50 | - | 308 | 315 | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 25,359 | 4,653 | 60 | - | 12,223 | - | 5,741 | - | 163 | 2,519 |
| DEPARTMENTAL FUNDS..... | 350 | 109 | - | - | 35 | - | 43 | - | 163 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 24,906 | 4,513 | - | - | 12,188 | - | 5,686 | - | - | 2,519 |
| PEACE CORPS..... | 103 | 31 | 60 | - | - | - | 12 | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL.... | 90,288 | 32,495 | 30,898 | - | 7,238 | - | 5,136 | 372 | 14,101 | 48 |
| FEDERAL AVIATION ADMINISTRATION..... | 23,018 | 18,900 | 3,385 | - | 733 | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 21,005 | 2,730 | 2,940 | - | - | - | 1,700 | - | 13,635 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 9,846 | 1,860 | 6,902 | - | 516 | - | 148 | 372 | - | 48 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 11,972 | 3,047 | 3,300 | - | 3,040 | - | 2,350 | - | 235 | - |
| OFFICE OF THE SECRETARY..... | 15,594 | 2,240 | 12,938 | - | 416 | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 4,389 | 2,968 | 866 | - | 147 | - | 408 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 4,464 | 750 | 567 | - | 2,386 | - | 530 | - | 231 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 373 | 373 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 373 | 373 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 477 | 477 | - | 37,536 | - | - | - | - | - | 515 |
| ATOMIC ENERGY COMMISSION..... | 145,297 | 4,118 | 2,114 | - | 16,652 | 71,344 | 2,718 | 10,300 | - | - |
| CIVIL AERONAUTICS BOARD..... | 270 | 270 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | 221 | 221 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 55,541 | 19,649 | 16,525 | - | 10,590 | 230 | 5,175 | 211 | 2,469 | 692 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 638 | 638 | - | - | - | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 388 | 388 | - | - | - | - | - | - | - | - |
| FEDERAL TRADE COMMISSION..... | 467 | 467 | - | - | - | - | - | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | 83 | 65 | - | - | - | - | 18 | - | - | - |
| LIBRARY OF CONGRESS..... | 1,006 | 1,006 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 851,515 | 454,421 | 307,272 | 1,137 | 37,473 | 38,373 | 11,408 | 368 | - | 1,063 |
| NATIONAL SCIENCE FOUNDATION..... | 42,150 | 2,862 | 1,530 | - | 33,789 | 447 | 3,065 | 457 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 36,750 | 5,054 | 10,819 | - | 13,357 | - | 7,220 | 300 | - | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 995 | 670 | 250 | - | - | - | 75 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 594 | 594 | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 7,478 | 7,335 | - | - | 143 | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 2,335 | 1,335 | 400 | - | 120 | - | 400 | - | 80 | - |
| UNITED STATES INFORMATION AGENCY..... | 160 | 100 | 60 | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 55,304 | 54,362 | 60 | - | 464 | - | - | - | 418 | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-50. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | OTHER | FOREIGN |
|---|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|--------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | | |
| TOTAL, ALL AGENCIES..... | 4,244,480 | 1,518,531 | 1,273,067 | 42,404 | 825,581 | 149,655 | 257,400 | 47,255 | 92,612 | 37,975 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 175,885 | 126,682 | 202 | - | 45,209 | - | 604 | - | - | 3,188 |
| AGRICULTURAL RESEARCH SERVICE..... | 88,290 | 83,727 | 102 | - | 1,030 | - | 243 | - | - | 3,188 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 45,633 | 1,517 | - | - | 43,905 | - | 211 | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 10,954 | 10,812 | - | - | 142 | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 707 | 697 | - | - | 10 | - | - | - | - | - |
| FOREST SERVICE..... | 29,628 | 29,538 | 5 | - | 85 | - | - | - | - | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 263 | 113 | - | - | - | - | 150 | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 410 | 278 | 95 | - | 37 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 86,042 | 62,542 | 15,072 | - | 4,031 | - | 614 | - | 3,571 | 212 |
| BUREAU OF THE CENSUS..... | 1,498 | 1,498 | - | - | - | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,591 | 666 | 435 | - | 390 | - | 100 | - | - | - |
| MARITIME ADMINISTRATION..... | 14,445 | 845 | 12,530 | - | 1,070 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 15,139 | 14,887 | 50 | - | - | - | - | - | - | 202 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | 51,430 | 42,707 | 2,057 | - | 2,571 | - | 514 | - | 3,571 | 10 |
| PATENT OFFICE..... | 1,469 | 1,469 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 470 | 470 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE ARMY..... | 1,388,076 | 497,639 | 715,002 | 3,195 | 76,190 | 33,295 | 29,538 | 31,144 | 500 | 1,573 |
| DEPARTMENT OF THE NAVY..... | 233,789 | 180,708 | 32,241 | - | 11,260 | 850 | 3,972 | 3,980 | 500 | 278 |
| DEPARTMENT OF THE AIR FORCE..... | 203,253 | 132,058 | 40,628 | - | 11,963 | 14,075 | 3,759 | 770 | - | - |
| DEFENSE AGENCIES..... | 617,000 | 102,600 | 477,696 | - | 23,807 | 250 | 12,247 | - | - | 400 |
| DEPARTMENT-WIDE FUNDS..... | 330,334 | 81,773 | 163,168 | 3,040 | 28,716 | 18,080 | 8,650 | 26,012 | - | 895 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 3,700 | 500 | 1,269 | 155 | 444 | 40 | 910 | 382 | - | - |
| FOOD AND DRUG ADMINISTRATION..... | 1,001,916 | 137,861 | 86,371 | - | 518,098 | 4,000 | 167,760 | 2,923 | 56,298 | 28,605 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. NATIONAL INSTITUTES OF HEALTH..... | 33,916 | 20,249 | 144 | - | 7,000 | - | 1,381 | - | - | 5,142 |
| OFFICE OF CHILD DEVELOPMENT..... | 119,681 | 29,607 | 3,406 | - | 37,531 | - | 22,323 | - | 17,304 | 9,510 |
| OFFICE OF EDUCATION..... | 747,085 | 73,055 | 81,518 | - | 440,922 | - | 130,043 | 723 | 16,921 | 3,903 |
| SOCIAL AND REHABILITATION SERVICE..... | 3,500 | 140 | - | - | 3,360 | - | - | - | - | - |
| SOCIAL SECURITY ADMINISTRATION..... | 51,998 | 1,475 | 1,200 | - | 16,086 | 4,000 | 8,017 | 2,200 | 19,020 | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 31,930 | 982 | - | - | 12,599 | - | 5,996 | - | 3,053 | 9,300 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 13,806 | 12,353 | 103 | - | 600 | - | - | - | - | 750 |
| BONNEVILLE POWER ADMINISTRATION..... | 12,740 | 50 | 10,142 | - | 127 | - | 1,911 | - | 510 | - |
| BUREAU OF LAND MANAGEMENT..... | 91,252 | 53,082 | 9,462 | 350 | 20,227 | - | 2,291 | - | 5,465 | 375 |
| BUREAU OF MINES..... | 495 | 98 | 253 | - | 144 | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 793 | 448 | - | - | 305 | - | - | - | 40 | - |
| BUREAU OF RECLAMATION..... | 31,855 | 27,655 | - | - | 3,500 | - | 600 | - | 100 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.. | 76 | 76 | - | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 9,493 | 3,796 | 1,681 | - | 3,500 | - | - | - | 516 | - |
| OFFICE OF COAL RESEARCH..... | 11,446 | 6,946 | - | - | 100 | - | - | - | 4,400 | - |
| OFFICE OF SALINE WATER..... | 17,506 | 12,974 | 2,033 | - | 2,324 | - | - | - | 175 | - |
| OFFICE OF THE SECRETARY..... | 4,059 | 1,000 | 1,809 | - | 1,250 | - | 900 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 3,775 | 200 | 2,325 | 350 | 500 | - | 400 | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,193 | 68 | 190 | - | 560 | - | - | - | - | 375 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 10,561 | 721 | 1,171 | - | 8,044 | - | 391 | - | 234 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 15,162 | 1,005 | 3,832 | - | 3,573 | - | 890 | 127 | 5,735 | - |
| | 2,162 | 63 | 509 | - | 573 | - | 890 | 127 | - | - |
| | 13,000 | 942 | 3,323 | - | 3,000 | - | - | - | 5,735 | - |

CONTINUED ON NEXT PAGE

TABLE C-50. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

CONTINUED

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|--|---------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|--------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | |
| DEPARTMENT OF LABOR, TOTAL..... | 9,930 | 5,061 | 624 | - | 1,561 | - | 1,810 | - | 874 | - |
| BUREAU OF LABOR STATISTICS..... | 1,154 | 1,154 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,243 | 1,374 | 624 | - | 1,561 | - | 1,810 | - | 874 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,533 | 2,533 | - | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 5,860 | 2,506 | 2,639 | - | 100 | - | 300 | 315 | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 28,204 | 4,749 | - | - | 14,576 | - | 6,166 | - | 463 | 2,250 |
| DEPARTMENTAL FUNDS..... | 650 | 109 | - | - | 35 | - | 43 | - | 463 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 27,554 | 4,640 | - | - | 14,541 | - | 6,123 | - | - | 2,250 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 161,000 | 45,480 | 79,848 | 366 | 9,060 | - | 9,700 | 300 | 16,246 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 60,371 | 22,871 | 37,220 | - | 280 | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 24,584 | 3,196 | 3,442 | - | - | - | 2,000 | - | 15,946 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 10,500 | 1,933 | 7,901 | 366 | - | - | - | 300 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 21,050 | 3,600 | 6,650 | - | 6,100 | - | 4,700 | - | 100 | - |
| OFFICE OF THE SECRETARY..... | 31,000 | 8,000 | 21,400 | - | 1,000 | - | 500 | - | - | - |
| UNITED STATES COAST GUARD..... | 8,585 | 5,280 | 2,325 | - | 180 | - | 800 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 4,910 | 600 | 910 | - | 1,500 | - | 1,700 | - | 200 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 390 | 390 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 390 | 390 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 487 | 487 | 2,404 | 37,233 | 16,365 | 70,915 | 2,806 | 10,581 | - | 507 |
| ATOMIC ENERGY COMMISSION..... | 145,025 | 4,214 | - | - | - | - | - | - | - | - |
| CIVIL AERONAUTICS BOARD..... | 331 | 331 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | 237 | 237 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 70,302 | 27,829 | 23,010 | - | 11,517 | 183 | 4,972 | 164 | 2,427 | 200 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 869 | 669 | 160 | - | 40 | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 497 | 497 | - | - | - | - | - | - | - | - |
| FEDERAL TRADE COMMISSION..... | 460 | 460 | - | - | - | - | - | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | 20 | 20 | - | - | - | - | - | - | - | - |
| LIBRARY OF CONGRESS..... | 1,175 | 1,175 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 873,546 | 472,311 | 310,549 | 260 | 32,410 | 40,262 | 15,988 | 701 | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 70,400 | 3,050 | 2,000 | 1,000 | 58,350 | 1,000 | 4,000 | 1,000 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 37,100 | 5,194 | 11,130 | - | 13,356 | - | 7,420 | - | - | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 535 | 375 | 85 | - | - | - | 75 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 648 | 648 | - | - | - | - | - | - | - | - |
| SMALL BUSINESS ADMINISTRATION..... | 205 | 10 | - | - | 90 | - | - | - | 105 | - |
| TENNESSEE VALLEY AUTHORITY..... | 8,197 | 8,100 | - | - | 97 | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 2,420 | 1,300 | 425 | - | 140 | - | 555 | - | - | - |
| UNITED STATES INFORMATION AGENCY..... | 150 | 100 | 50 | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 55,419 | 54,477 | 60 | - | 464 | - | - | - | 418 | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-51. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH BY DETAILED FIELD OF SCIENCE,
FISCAL YEARS 1970, 1971, AND 1972
(THOUSANDS OF DOLLARS)

| FIELD OF SCIENCE | ACTUAL, 1970 | ESTIMATES | |
|--|--------------|-----------|-----------|
| | | 1971 | 1972 |
| TOTAL, ALL FIELDS..... | 3,539,650 | 3,830,092 | 4,244,480 |
| LIFE SCIENCES, TOTAL..... | 957,391 | 1,103,977 | 1,209,762 |
| BIOLOGICAL..... | 257,247 | 279,005 | 298,736 |
| CLINICAL MEDICAL..... | 653,950 | 770,237 | 844,027 |
| OTHER MEDICAL SCIENCES..... | 32,567 | 33,213 | 44,233 |
| LIFE SCIENCES, NEC..... | 13,627 | 21,522 | 22,766 |
| PSYCHOLOGY, TOTAL..... | 56,091 | 65,016 | 74,436 |
| BIOLOGICAL ASPECTS..... | 15,605 | 15,955 | 21,854 |
| SOCIAL ASPECTS..... | 39,454 | 47,052 | 51,031 |
| PSYCHOLOGICAL SCIENCES, NEC..... | 1,032 | 2,009 | 1,551 |
| PHYSICAL SCIENCES, TOTAL..... | 305,997 | 299,931 | 356,497 |
| ASTRONOMY..... | 7,068 | 8,376 | 10,030 |
| CHEMISTRY..... | 100,788 | 101,576 | 117,210 |
| PHYSICS..... | 185,379 | 177,856 | 216,203 |
| PHYSICAL SCIENCES, NEC..... | 12,762 | 12,123 | 13,054 |
| ENVIRONMENTAL SCIENCES, TOTAL..... | 234,251 | 270,532 | 282,734 |
| ATMOSPHERIC SCIENCES..... | 114,608 | 138,355 | 142,730 |
| GEOLOGICAL SCIENCES..... | 64,589 | 71,372 | 74,913 |
| OCEANOGRAPHY (EXCLUDING BIOLOGICAL)..... | 36,657 | 35,668 | 37,287 |
| ENVIRONMENTAL SCIENCE, NEC..... | 18,397 | 25,137 | 27,804 |
| MATHEMATICS..... | 43,232 | 50,855 | 53,576 |
| ENGINEERING, TOTAL..... | 1,725,098 | 1,774,211 | 1,949,663 |
| AERONAUTICAL..... | 407,744 | 414,083 | 423,502 |
| ASTRONAUTICAL..... | 272,550 | 272,920 | 314,639 |
| CHEMICAL..... | 108,299 | 104,546 | 111,157 |
| CIVIL..... | 53,137 | 73,467 | 88,545 |
| ELECTRICAL..... | 319,115 | 321,299 | 359,830 |
| MECHANICAL..... | 97,039 | 105,369 | 102,009 |
| METALLURGY & MATERIALS..... | 98,108 | 101,851 | 106,600 |
| ENGINEERING, NEC..... | 369,106 | 380,676 | 443,381 |
| SOCIAL SCIENCES, TOTAL..... | 149,734 | 191,573 | 211,167 |
| ANTHROPOLOGY..... | 713 | 1,164 | 3,666 |
| ECONOMICS..... | 58,396 | 58,949 | 65,168 |
| HISTORY..... | 118 | 128 | 130 |
| LINGUISTICS..... | 178 | 215 | 386 |
| POLITICAL SCIENCE..... | 3,658 | 2,665 | 3,049 |
| SOCIOLOGY..... | 25,365 | 33,259 | 51,335 |
| SOCIAL SCIENCES, NEC..... | 61,306 | 95,193 | 87,433 |
| OTHER SCIENCES, NEC..... | 67,856 | 73,997 | 106,645 |

TABLE C-52. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970.
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOL- OGY | PHYSICAL SCIENCES | ENVIRON- MENTAL SCIENCES | MATHE- MATICS | ENGI- NEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|---|--------------------|-------------------|-----------------|-------------------|-----------------------------|------------------|-------------------------|---------------------|-----------------------|
| TOTAL, ALL AGENCIES..... | 3,539,650 | 957,391 | 56,091 | 305,997 | 234,251 | 43,232 | 1,725,098 | 149,734 | 67,856 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 156,216 | 91,014 | 27 | 19,112 | 3,265 | 379 | 18,617 | 23,594 | 208 |
| AGRICULTURAL RESEARCH SERVICE..... | 79,126 | 49,102 | 27 | 15,576 | 583 | 233 | 12,665 | 940 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 37,852 | 26,029 | - | 1,893 | 217 | - | 1,297 | 8,416 | - |
| ECONOMIC RESEARCH SERVICE..... | 10,582 | - | - | - | - | - | - | 10,582 | - |
| FARMER COOPERATIVE SERVICE..... | 663 | - | - | - | - | - | - | 663 | - |
| FOREST SERVICE..... | 27,385 | 15,883 | - | 1,643 | 2,465 | - | 4,655 | 2,739 | 208 |
| NATIONAL AGRICULTURAL LIBRARY..... | 208 | - | - | - | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 400 | - | - | - | - | 146 | - | 254 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 54,913 | 17,214 | 777 | 5,646 | 10,519 | 927 | 11,802 | 6,459 | 1,569 |
| BUREAU OF THE CENSUS..... | 1,357 | - | 458 | - | - | 88 | - | 811 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 3,809 | - | - | - | - | - | - | 3,809 | - |
| MARITIME ADMINISTRATION..... | 4,878 | - | - | - | - | 89 | 3,268 | 1,521 | - |
| NATIONAL BUREAU OF STANDARDS..... | 12,705 | - | 319 | 4,690 | - | 750 | 6,621 | 318 | 644 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. PATENT OFFICE..... | 31,877 287 | 17,214 - | - - | 956 - | 10,519 - | - - | 1,913 - | - - | 638 287 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,310,113 | 75,117 | 15,112 | 151,228 | 78,924 | 32,905 | 914,022 | 2,878 | 39,927 |
| DEPARTMENT OF THE ARMY..... | 246,085 | 35,940 | 6,064 | 52,840 | 9,562 | 3,695 | 119,505 | 2,154 | 16,325 |
| DEPARTMENT OF THE NAVY..... | 190,978 | 5,832 | 2,311 | 38,491 | 19,814 | 23,298 | 101,232 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 584,000 | 24,507 | 5,625 | 2,934 | 7,931 | 474 | 542,529 | - | - |
| DEFENSE AGENCIES..... | 284,959 | 8,218 | 829 | 56,282 | 41,617 | 5,008 | 149,703 | 398 | 22,904 |
| DEPARTMENT-WIDE FUNDS..... | 4,091 | 620 | 283 | 681 | - | 430 | 1,053 | 326 | 698 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 741,331 | 596,851 | 25,104 | 17,326 | 465 | 4,988 | 20,380 | 61,840 | 14,377 |
| FOOD AND DRUG ADMINISTRATION..... | 21,805 | 15,492 | - | 6,313 | - | - | - | - | 641 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. NATIONAL INSTITUTES OF HEALTH..... | 100,018 549,403 | 75,908 493,831 | 13,297 5,309 | - 11,013 | - 465 | 349 4,639 | 87 20,148 | 9,736 262 500 | 13,736 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | 500 | - | - | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 25,254 | - | 4,525 | - | - | - | 145 | 20,729 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 31,885 | 11,120 | 1,973 | - | - | - | - | 18,647 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 11,966 | - | - | - | - | - | - | 11,966 | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. DEPARTMENT OF THE INTERIOR, TOTAL..... | 7,097 71,769 | - 11,830 | - 59 | - 5,553 | - 14,387 | - 1,065 | 7,097 37,579 | - 1,144 | - 153 |
| BONNEVILLE POWER ADMINISTRATION..... | 524 | - | - | 25 | 31 | 20 | 448 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 695 | 635 | - | - | 1,648 | - | - | 60 | - |
| BUREAU OF MINES..... | 27,646 | - | - | 3,342 | - | 451 | 22,205 | 92 | - |
| BUREAU OF OUTDOOR RECREATION..... | 92 | - | - | - | 4,810 | - | 2,255 | 42 | - |
| BUREAU OF RECLAMATION..... | 7,120 | 13 | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.. GEOLOGICAL SURVEY..... | 9,582 10,296 | 9,582 - | - - | 1,946 - | 6,602 - | 374 - | 1,374 2,341 5,031 | - - | - |
| OFFICE OF COAL RESE'CH..... | 2,341 | - | - | - | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 5,001 | - | - | - | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 8,472 | 1,600 | 58 | 240 | 1,296 | 220 | 3,955 | 950 | 153 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 5,334 | 326 | 1,239 | 630 | - | 240 | 363 | 2,536 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS LAW ENFORCEMENT ASSISTANCE ADMIN..... | 839 4,495 | 326 - | 114 1,125 | - 630 | - - | - 240 | - 363 | 399 2,137 | - - |
| DEPARTMENT OF LABOR, TOTAL..... | 9,234 | - | - | - | - | - | - | 9,234 | - |
| BUREAU OF LABOR STATISTICS..... | 1,144 | - | - | - | - | - | - | 1,144 | - |
| MANPOWER ADMINISTRATION..... | 5,874 | - | - | - | - | - | - | 5,874 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,216 | - | - | - | - | - | - | 2,216 | - |
| POSTAL SERVICE..... | 4,577 | - | - | - | - | - | - | - | 4,577 |

TABLE C-52. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1970

CONTINUED

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|---------|---------------|------------|-------------------|------------------------|-------------|-------------|-----------------|--------------------|
| DEPARTMENT OF STATE, TOTAL..... | 18,895 | 14,421 | 143 | - | - | - | 1,392 | 2,939 | - |
| DEPARTMENTAL FUNDS..... | 125 | - | - | - | - | - | - | 125 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... PEACE CORPS..... | 18,627 | 14,421 | 143 | - | - | - | 1,392 | 2,814 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 57,164 | 3,145 | 3,691 | 32 | 4,249 | 2,364 | 42,516 | 10,442 | 725 |
| FEDERAL AVIATION ADMINISTRATION..... | 9,960 | 1,484 | 395 | - | 400 | 350 | 7,331 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 21,218 | - | - | - | - | - | 20,157 | 1,061 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 4,743 | - | - | - | - | 400 | 4,020 | 323 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 14,765 | 1,651 | 3,286 | - | - | 1,554 | 7,166 | 1,108 | - |
| OFFICE OF THE SECRETARY..... | 8,956 | - | - | - | 249 | - | 1,902 | 6,805 | - |
| UNITED STATES COAST GUARD..... | 2,801 | 10 | - | 32 | 2,164 | - | 595 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 4,721 | - | 10 | - | 1,436 | 60 | 1,345 | 1,145 | 725 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 286 | - | - | 270 | - | - | 16 | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 286 | - | - | 270 | - | - | 16 | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 553 | - | - | - | - | - | - | 553 | - |
| ATOMIC ENERGY COMMISSION..... | 146,448 | 43,120 | - | 69,312 | 9,462 | - | 24,554 | 263 | - |
| CIVIL AERONAUTICS BOARD..... | 263 | - | - | - | - | - | - | - | - |
| CIVIL SERVICE COMMISSION..... | 196 | - | 196 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 47,534 | 17,057 | 8 | 5,929 | 4,240 | 193 | 19,586 | 521 | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1,015 | - | - | - | - | - | 1,015 | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 390 | - | - | - | - | - | - | 390 | - |
| FEDERAL TRADE COMMISSION..... | 388 | - | - | - | - | - | - | 388 | - |
| GENERAL SERVICES ADMINISTRATION..... | 215 | - | - | - | - | - | 194 | - | 21 |
| LIBRARY OF CONGRESS..... | 968 | - | - | - | - | - | - | - | 968 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 772,698 | 27,720 | 810 | 27,397 | 102,411 | - | 614,360 | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 29,812 | 7,457 | 120 | 1,627 | 6,239 | 100 | 4,258 | 5,348 | 4,663 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 27,800 | 2,600 | 5,000 | - | - | - | - | 20,200 | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 1,016 | - | - | - | - | - | 531 | - | 485 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 557 | 170 | 6 | 142 | 50 | 11 | 167 | 11 | - |
| SMALL BUSINESS ADMINISTRATION..... | 101 | - | - | - | - | - | - | 101 | - |
| TENNESSEE VALLEY AUTHORITY..... | 6,376 | 1,727 | - | 890 | - | - | 3,406 | 353 | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 3,732 | - | - | 303 | 40 | - | 2,811 | 395 | 183 |
| UNITED STATES INFORMATION AGENCY..... | 157 | - | - | - | - | - | 157 | - | - |
| VETERANS ADMINISTRATION..... | 52,502 | 47,622 | 3,800 | 600 | - | 60 | 275 | 145 | - |

TABLE C-53. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOL- OGY | PHYSICAL SCIENCES | ENVIRON- MENTAL SCIENCES | MATHE- MATICS | ENGI- NEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|-----------|---------------|-----------------|-------------------|-----------------------------|------------------|------------------|-----------------|-----------------------|
| TOTAL, ALL AGENCIES..... | 3,830,092 | 1,103,977 | 65,016 | 299,931 | 270,532 | 50,855 | 1,774,211 | 191,573 | 73,997 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 169,830 | 99,211 | 26 | 20,817 | 3,514 | 385 | 20,377 | 25,241 | 259 |
| AGRICULTURAL RESEARCH SERVICE..... | 86,420 | 53,726 | 26 | 16,962 | 618 | 235 | 13,917 | 936 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 41,539 | 28,574 | - | 2,077 | 230 | - | 1,423 | 9,235 | - |
| ECONOMIC RESEARCH SERVICE..... | 11,138 | - | - | - | - | - | - | 11,138 | - |
| FARMER COOPERATIVE SERVICE..... | 709 | - | - | - | - | - | - | 709 | - |
| FOREST SERVICE..... | 29,355 | 16,911 | - | 1,778 | 2,666 | - | 5,037 | 2,963 | 259 |
| NATIONAL AGRICULTURAL LIBRARY..... | 259 | - | - | - | - | 150 | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 410 | - | - | - | - | - | - | 260 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 78,416 | 22,948 | 1,024 | 6,231 | 14,024 | 894 | 25,882 | 4,906 | 2,507 |
| BUREAU OF THE CENSUS..... | 1,759 | - | 599 | - | - | 111 | - | 1,049 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,844 | - | - | - | - | - | - | 1,844 | - |
| MARITIME ADMINISTRATION..... | 17,493 | - | - | - | - | - | 15,905 | 1,588 | - |
| NATIONAL BUREAU OF STANDARDS..... | 13,884 | - | - | 4,956 | - | 783 | 6,943 | - | 1,202 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 42,497 | 22,948 | 425 | 1,275 | 14,024 | - | 2,550 | 425 | 850 |
| OFFICE OF TELECOMMUNICATIONS..... | 484 | - | - | - | - | - | 484 | - | - |
| PATENT OFFICE..... | 455 | - | - | - | - | - | - | - | 455 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,236,296 | 65,211 | 18,518 | 132,774 | 76,766 | 39,522 | 861,585 | 2,436 | 39,484 |
| BUREAU OF THE ARMY..... | 209,661 | 28,938 | 4,755 | 40,956 | 8,250 | 3,378 | 108,026 | 1,746 | 13,612 |
| DEPARTMENT OF THE NAVY..... | 182,960 | 5,928 | 2,118 | 38,258 | 14,682 | 22,112 | 99,401 | - | 461 |
| DEPARTMENT OF THE AIR FORCE..... | 564,000 | 24,801 | 10,180 | 2,832 | 6,360 | 594 | 519,233 | - | - |
| DEFENSE AGENCIES..... | 276,123 | 5,074 | 1,173 | 50,128 | 47,474 | 13,090 | 134,036 | 240 | 24,908 |
| DEPARTMENT-WIDE FUNDS..... | 3,552 | 470 | 292 | 600 | - | 348 | 889 | 450 | 503 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 910,400 | 712,876 | 31,506 | 23,068 | 564 | 6,244 | 24,530 | 94,230 | 17,382 |
| FOOD AND DRUG ADMINISTRATION..... | 25,922 | 16,174 | - | 9,748 | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 122,575 | 91,361 | 15,730 | - | - | 635 | 66 | 13,377 | 1,406 |
| NATIONAL INSTITUTES OF HEALTH..... | 658,338 | 592,011 | 6,226 | 13,320 | 564 | 5,609 | 24,314 | 318 | 15,976 |
| OFFICE OF CHILD DEVELOPMENT..... | 2,000 | 500 | - | - | - | - | - | 1,000 | - |
| OFFICE OF EDUCATION..... | 56,283 | - | 5,975 | - | - | - | - | 50,308 | - |
| OFFICE OF REHABILITATION SERVICE..... | 32,200 | 12,830 | 3,075 | - | - | - | 150 | 16,145 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 13,082 | - | - | - | - | - | - | 13,082 | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 11,862 | - | - | - | - | - | 11,862 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 83,904 | 13,135 | 62 | 5,722 | 19,397 | 1,452 | 42,604 | 1,353 | 179 |
| BONNEVILLE POWER ADMINISTRATION..... | 474 | - | - | 27 | 46 | 20 | 381 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 755 | 698 | - | - | - | - | - | 57 | - |
| BUREAU OF MINES..... | 31,599 | - | - | 3,383 | 2,334 | 743 | 25,139 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 133 | - | - | - | - | - | - | 133 | - |
| BUREAU OF RECLAMATION..... | 8,974 | 10 | - | - | 6,525 | - | 2,374 | 65 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 10,581 | 10,581 | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 12,815 | - | - | 2,037 | 8,996 | 391 | 1,391 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,809 | - | - | - | - | - | 4,809 | - | - |
| OFFICE OF SALINE WATER..... | 3,400 | - | - | - | - | - | 3,400 | - | - |
| OFFICE OF THE SECRETARY..... | 583 | - | - | - | - | - | 583 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 9,781 | 1,846 | 62 | 275 | 1,496 | 298 | 4,527 | 1,098 | 179 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 6,210 | 778 | 1,191 | 719 | - | 295 | 363 | 2,864 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 1,560 | 778 | 16 | 39 | - | - | - | 727 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 4,650 | - | 1,175 | 680 | - | 295 | 363 | 2,137 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 9,917 | - | - | - | - | - | - | 9,917 | - |

TABLE C-53. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|---------|---------------|------------|-------------------|------------------------|-------------|-------------|-----------------|--------------------|
| POSTAL SERVICE..... | 5,568 | - | - | - | - | - | - | - | 5,568 |
| DEPARTMENT OF STATE, TOTAL..... | 25,359 | 18,731 | 103 | - | 60 | - | 1,210 | 5,255 | - |
| DEPARTMENTAL FUNDS..... | 350 | - | - | - | - | - | - | 350 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 24,906 | 18,731 | - | - | 60 | - | 1,210 | 4,905 | - |
| PEACE CORPS..... | 103 | - | 103 | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 90,288 | 3,127 | 2,727 | 95 | 4,150 | 1,498 | 67,770 | 10,711 | 210 |
| FEDERAL AVIATION ADMINISTRATION..... | 23,018 | 1,667 | 443 | - | 768 | 500 | 19,640 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 21,005 | - | - | - | - | - | 19,892 | 1,113 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 9,846 | 310 | 215 | - | - | - | 5,986 | 3,335 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 11,972 | 1,150 | 2,059 | - | - | 848 | 7,840 | 75 | - |
| OFFICE OF THE SECRETARY..... | 15,594 | - | - | - | 694 | - | 10,000 | 4,900 | - |
| UNITED STATES COAST GUARD..... | 4,389 | - | - | 95 | 2,638 | - | 1,656 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 4,464 | - | 10 | - | 50 | 150 | 2,756 | 1,288 | 210 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 373 | - | - | 355 | - | - | 18 | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 373 | - | - | 355 | - | - | 18 | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 477 | - | - | - | - | - | - | 477 | - |
| ATOMIC ENERGY COMMISSION..... | 145,297 | 43,102 | - | 68,376 | 9,298 | - | 24,521 | - | - |
| CIVIL AERONAUTICS BOARD..... | 270 | - | - | - | - | - | - | 270 | - |
| CIVIL SERVICE COMMISSION..... | 221 | - | 221 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 55,541 | 18,888 | 7 | 7,013 | 5,044 | 274 | 23,651 | 664 | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 638 | - | - | - | - | - | 638 | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 388 | - | - | - | - | - | - | 388 | - |
| FEDERAL TRADE COMMISSION..... | 467 | - | - | - | - | - | - | 467 | - |
| GENERAL SERVICES ADMINISTRATION..... | 83 | - | - | - | - | - | 63 | - | 20 |
| LIBRARY OF CONGRESS..... | 1,006 | - | - | - | - | - | - | - | 1,006 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 851,515 | 35,890 | 549 | 31,148 | 129,562 | - | 654,366 | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 42,150 | 10,765 | 175 | 1,635 | 8,054 | 220 | 8,208 | 6,370 | 6,723 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 36,750 | 6,900 | 5,000 | - | - | - | - | 24,850 | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 995 | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 594 | 182 | 7 | 152 | 53 | 11 | 498 | - | 497 |
| TENNESSEE VALLEY AUTHORITY..... | 7,478 | 1,949 | - | 976 | - | - | 178 | 11 | - |
| US ARMS CONTROL & DISARMAMENT AGENCY..... | 2,335 | - | - | 225 | 46 | - | 4,125 | 428 | - |
| UNITED STATES INFORMATION AGENCY..... | 160 | - | - | - | - | - | 1,317 | 585 | 162 |
| VETERANS ADMINISTRATION..... | 55,304 | 50,284 | 3,900 | 625 | - | 60 | 285 | 150 | - |

TABLE C-54. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOLOGY | PHYSICAL SCIENCES | ENVIRONMENTAL SCIENCES | MATHEMATICS | ENGINEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|-----------|---------------|------------|-------------------|------------------------|-------------|-------------|-----------------|--------------------|
| TOTAL, ALL AGENCIES..... | 4,244,480 | 1,209,762 | 74,436 | 356,497 | 282,734 | 53,576 | 1,949,663 | 211,167 | 106,645 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 175,885 | 103,899 | 26 | 21,232 | 3,550 | 384 | 20,565 | 25,966 | 263 |
| AGRICULTURAL RESEARCH SERVICE..... | 88,290 | 55,338 | 26 | 17,172 | 619 | 234 | 13,964 | 937 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 45,633 | 31,377 | - | 2,282 | 265 | - | 1,564 | 10,145 | - |
| ECONOMIC RESEARCH SERVICE..... | 10,954 | - | - | - | - | - | - | 10,954 | - |
| FARMER COOPERATIVE SERVICE..... | 707 | - | - | - | - | - | - | 707 | - |
| FOREST SERVICE..... | 29,628 | 17,184 | - | 1,778 | 2,666 | - | 5,037 | 2,963 | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 263 | - | - | - | - | 150 | - | 260 | - |
| STATISTICAL REPORTING SERVICE..... | 410 | - | - | - | - | - | - | - | 263 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 86,042 | 27,772 | 982 | 6,834 | 16,972 | 894 | 26,065 | 3,574 | 2,949 |
| BUREAU OF THE CENSUS..... | 1,498 | - | 468 | - | - | 112 | - | 918 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,591 | - | - | - | - | - | - | 1,591 | - |
| MARITIME ADMINISTRATION..... | 14,445 | - | - | - | - | - | 13,895 | 550 | - |
| NATIONAL BUREAU OF STANDARDS..... | 15,139 | - | - | 5,291 | - | 782 | 7,615 | - | 1,451 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 51,430 | - | 514 | 1,543 | 16,972 | - | 3,086 | 515 | 1,028 |
| OFFICE OF TELECOMMUNICATIONS..... | 1,469 | - | - | - | - | - | 1,469 | - | - |
| PATENT OFFICE..... | 470 | - | - | - | - | - | - | - | 470 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,388,076 | 71,733 | 25,625 | 155,416 | 74,634 | 39,788 | 957,306 | 6,317 | 57,257 |
| DEPARTMENT OF THE ARMY..... | 233,789 | 30,402 | 9,137 | 44,691 | 8,731 | 3,027 | 119,791 | 5,500 | 12,510 |
| DEPARTMENT OF THE NAVY..... | 203,253 | 8,285 | 3,370 | 43,834 | 16,078 | 25,029 | 106,657 | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 617,000 | 27,818 | 12,289 | 2,582 | 6,651 | 409 | 567,251 | - | - |
| DEFENSE AGENCIES..... | 330,334 | 4,739 | 525 | 63,685 | 43,174 | 10,955 | 162,682 | 350 | 44,224 |
| DEPARTMENT-WIDE FUNDS..... | 3,700 | 489 | 304 | 624 | - | 368 | 925 | 467 | 523 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 1,001,916 | 798,855 | 33,921 | 27,222 | 644 | 6,796 | 27,894 | 86,488 | 20,096 |
| FOOD AND DRUG ADMINISTRATION..... | 33,916 | 21,909 | - | 12,007 | - | - | 44 | 12,679 | 1,924 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 119,681 | 87,234 | 17,411 | - | - | 389 | 27,750 | 363 | 18,172 |
| NATIONAL INSTITUTES OF HEALTH..... | 747,085 | 671,512 | 7,022 | 15,215 | 644 | 6,407 | - | 2,000 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 3,500 | 1,000 | 500 | - | - | - | - | 45,430 | - |
| OFFICE OF EDUCATION..... | 51,998 | - | 6,568 | - | - | - | 100 | 12,210 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 31,930 | 17,200 | 2,420 | - | - | - | - | 13,806 | - |
| SOCIAL SECURITY ADMINISTRATION..... | 13,806 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 12,740 | - | - | - | - | - | 12,740 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 91,252 | 14,172 | 68 | 5,748 | 22,745 | 1,254 | 45,693 | 1,378 | 194 |
| BONNEVILLE POWER ADMINISTRATION..... | 495 | - | - | 44 | - | 20 | 431 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 793 | 735 | - | - | - | - | - | 58 | - |
| BUREAU OF MINES..... | 31,855 | - | - | 3,270 | 772 | 499 | 27,314 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 76 | - | - | - | 6,700 | - | 2,708 | 76 | - |
| BUREAU OF RECLAMATION..... | 9,493 | 5 | - | - | - | - | - | 80 | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 11,446 | 11,446 | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 17,506 | - | - | 2,134 | 13,502 | 410 | 1,460 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,059 | - | - | - | - | - | 4,059 | - | - |
| OFFICE OF SALINE WATER..... | 3,775 | - | - | - | - | - | 3,775 | - | - |
| OFFICE OF THE SECRETARY..... | 1,193 | - | - | - | 140 | - | 1,053 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 10,561 | 1,986 | 68 | 300 | 1,631 | 325 | 4,893 | 1,164 | 194 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 15,162 | 1,399 | 2,115 | 2,864 | - | 1,648 | 1,990 | 5,146 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 2,162 | 1,399 | - | 254 | - | 38 | - | 471 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 13,000 | - | 2,115 | 2,610 | - | 1,610 | 1,990 | 4,675 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 9,930 | - | - | - | - | - | - | 9,930 | - |
| BUREAU OF LABOR STATISTICS..... | 1,154 | - | - | - | - | - | - | 1,154 | - |
| MANPOWER ADMINISTRATION..... | 6,243 | - | - | - | - | - | - | 6,243 | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,533 | - | - | - | - | - | - | 2,533 | - |

CONTINUED ON NEXT PAGE

TABLE C-54. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY AGENCY AND FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | LIFE SCIENCES | PSYCHOL- OGY | PHYSICAL SCIENCES | ENVIRON- MENTAL SCIENCES | MATHE- MATICS | ENGI- NEERING | SOCIAL SCIENCES | OTHER SCIENCES NEC |
|--|---------|---------------|-----------------|-------------------|-----------------------------|------------------|------------------|-----------------|-----------------------|
| POSTAL SERVICE..... | 5,860 | - | - | - | - | - | - | - | 5,860 |
| DEPARTMENT OF STATE, TOTAL..... | 28,204 | 19,219 | - | - | 200 | - | 1,705 | 7,080 | - |
| DEPARTMENTAL FUNDS..... | 650 | - | - | - | - | - | - | 650 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT.... | 27,554 | 19,219 | - | - | 200 | - | 1,705 | 6,430 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 161,000 | 4,805 | 5,240 | 825 | 7,755 | 2,192 | 123,865 | 16,318 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 60,371 | 1,805 | 480 | - | 3,000 | 500 | 54,586 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 24,584 | - | - | - | - | - | 23,284 | 1,300 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 10,500 | 500 | 250 | - | - | - | 5,765 | 3,985 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 21,050 | 2,500 | 4,500 | - | - | 1,300 | 12,750 | - | - |
| OFFICE OF THE SECRETARY..... | 31,000 | - | - | - | 675 | - | 20,750 | 9,575 | - |
| UNITED STATES COAST GUARD..... | 8,585 | - | - | 825 | 3,030 | - | 4,730 | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 4,910 | - | 10 | - | 1,050 | 392 | 2,000 | 1,458 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 390 | - | - | 372 | - | - | 18 | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 390 | - | - | 372 | - | - | 18 | - | - |
| OTHER AGENCIES | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS.... | 487 | - | - | - | - | - | - | 487 | - |
| ATOMIC ENERGY COMMISSION..... | 145,025 | 43,367 | - | 67,658 | 9,580 | - | 24,420 | - | - |
| CIVIL AERONAUTICS BOARD..... | 331 | - | - | - | - | - | - | 331 | - |
| CIVIL SERVICE COMMISSION..... | 237 | - | 237 | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 70,302 | 22,656 | 7 | 8,265 | 6,310 | 347 | 31,911 | 806 | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 869 | - | - | - | - | - | 869 | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 497 | - | - | - | - | - | - | 497 | - |
| FEDERAL TRADE COMMISSION..... | 460 | - | - | - | - | - | - | 460 | - |
| GENERAL SERVICES ADMINISTRATION..... | 20 | - | - | - | - | - | - | - | 20 |
| LIBRARY OF CONGRESS..... | 1,175 | - | - | - | - | - | - | - | 1,175 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 873,546 | 35,457 | 1,988 | 54,938 | 127,802 | - | 653,361 | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 70,400 | 12,880 | 320 | 3,100 | 12,440 | 200 | 14,550 | 8,802 | 18,108 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 37,100 | 900 | - | - | - | - | - | 36,200 | - |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 535 | - | - | - | - | - | - | - | 535 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 648 | 198 | 7 | 166 | 58 | 13 | 194 | 12 | - |
| SMALL BUSINESS ADMINISTRATION..... | 205 | - | - | - | - | - | - | 205 | - |
| TENNESSEE VALLEY AUTHORITY..... | 8,197 | 2,051 | - | 1,075 | - | - | 4,685 | 386 | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 2,420 | - | - | 157 | 44 | - | 1,397 | 634 | 188 |
| UNITED STATES INFORMATION AGENCY..... | 150 | - | - | - | - | - | 150 | - | - |
| VETERANS ADMINISTRATION..... | 55,419 | 50,399 | 3,900 | 625 | - | 60 | 285 | 150 | - |

TABLE C-55. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 56,091 | 15,605 | 39,454 | 1,032 | 305,997 | 7,068 | 100,788 | 185,379 | 12,762 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 27 | - | 27 | - | 19,112 | - | 14,880 | 4,232 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 27 | - | 27 | - | 15,576 | - | 12,166 | 3,410 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 1,893 | - | 1,893 | - | - |
| FOREST SERVICE..... | - | - | - | - | 1,643 | - | 821 | 822 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 777 | 319 | 458 | - | 5,646 | - | 3,288 | 2,352 | 6 |
| BUREAU OF THE CENSUS..... | 458 | - | 458 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | 4,690 | - | 2,332 | 2,352 | 6 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 319 | 319 | - | - | 956 | - | 956 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 15,112 | 3,424 | 10,859 | 829 | 151,228 | 1,013 | 28,078 | 111,143 | 10,994 |
| DEPARTMENT OF THE ARMY..... | 6,064 | 2,914 | 3,150 | - | 52,840 | 8 | 22,885 | 23,287 | 6,660 |
| DEPARTMENT OF THE NAVY..... | 2,311 | - | 2,311 | - | 38,491 | 244 | 3,544 | 31,664 | 3,039 |
| DEPARTMENT OF THE AIR FORCE..... | 5,625 | 475 | 5,150 | - | 2,934 | 615 | 1,221 | 1,098 | - |
| DEFENSE AGENCIES..... | 829 | - | - | 829 | 56,282 | 146 | 408 | 54,433 | 1,295 |
| DEPARTMENT-WIDE FUNDS..... | 283 | 35 | 248 | - | 681 | - | 20 | 661 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 25,104 | 6,956 | 17,945 | 203 | 17,326 | - | 16,849 | 45 | 432 |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | 6,313 | - | 6,313 | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 13,297 | 4,120 | 9,079 | 98 | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 5,309 | 2,836 | 2,473 | 105 | 11,013 | - | 10,536 | 45 | 432 |
| OFFICE OF EDUCATION..... | 4,525 | - | 4,420 | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 1,973 | - | 1,973 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 58 | - | 58 | - | 5,553 | - | 4,928 | 625 | - |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | 25 | - | - | 25 | - |
| BUREAU OF MINES..... | - | - | - | - | 3,342 | - | 3,121 | 221 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | 1,946 | - | 1,572 | 374 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 58 | - | 58 | - | 240 | - | 235 | 5 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,239 | - | 1,239 | - | 630 | - | - | 630 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 114 | - | 114 | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,125 | - | 1,125 | - | 630 | - | - | 630 | - |
| DEPARTMENT OF STATE, TOTAL..... | 143 | - | 143 | - | - | - | - | - | - |
| PEACE CORPS..... | 143 | - | 143 | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,691 | 395 | 3,296 | - | 32 | - | - | 32 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 395 | 395 | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 3,286 | - | 3,286 | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | 32 | - | - | 32 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 10 | - | 10 | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | 270 | - | 70 | 40 | 160 |
| BUREAU OF ENGRAVING AND PRINTING..... | - | - | - | - | 270 | - | 70 | 40 | 160 |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | - | - | - | - | 69,312 | - | 25,202 | 44,110 | - |
| GENERAL SERVICES ADMINISTRATION..... | 136 | - | 196 | - | - | - | - | - | - |

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TABLE C-56. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|--|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC | |
| TOTAL, ALL AGENCIES..... | 65,016 | 15,955 | 47,052 | 2,009 | 299,931 | 8,376 | 101,576 | 177,856 | 12,123 | |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 26 | - | 26 | - | 20,817 | - | 16,337 | 4,480 | - | |
| AGRICULTURAL RESEARCH SERVICE..... | 26 | - | 26 | - | 16,962 | - | 13,371 | 3,591 | - | |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 2,077 | - | 2,077 | - | - | |
| FOREST SERVICE..... | - | - | - | - | 1,778 | - | 889 | 889 | - | |
| DEPARTMENT OF COMMERCE, TOTAL..... | 1,024 | 425 | 599 | - | 6,231 | - | 3,678 | 2,546 | 7 | |
| BUREAU OF THE CENSUS..... | 599 | - | 599 | - | - | - | - | - | - | |
| NATIONAL BUREAU OF STANDARDS..... | 425 | 425 | - | - | 4,956 | - | 2,403 | 2,546 | 7 | |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | | | | | 1,275 | - | 1,275 | - | - | |
| DEPARTMENT OF DEFENSE, TOTAL..... | 18,518 | 2,569 | 14,871 | 1,078 | 132,774 | 1,364 | 20,643 | 100,718 | 10,049 | |
| DEPARTMENT OF THE ARMY..... | 4,755 | 1,874 | 2,881 | - | 40,956 | 140 | 15,677 | 19,378 | 5,761 | |
| DEPARTMENT OF THE NAVY..... | 2,118 | - | 2,118 | - | 38,258 | 631 | 3,166 | 31,563 | 2,898 | |
| DEPARTMENT OF THE AIR FORCE..... | 10,180 | 570 | 9,610 | - | 2,832 | 493 | 1,459 | 880 | - | |
| DEFENSE AGENCIES..... | 1,173 | 95 | - | 1,078 | 50,128 | 100 | 335 | 48,303 | 1,390 | |
| DEPARTMENT-WIDE FUNDS..... | 292 | 30 | 262 | - | 600 | - | 6 | 594 | - | |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 31,506 | 8,123 | 22,452 | 931 | 23,068 | - | 22,493 | 56 | 519 | |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | 9,748 | - | 9,748 | - | - | |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 15,730 | 4,695 | 10,164 | 871 | - | - | - | - | - | |
| NATIONAL INSTITUTES OF HEALTH..... | 6,226 | 3,428 | 2,798 | - | 13,320 | - | 12,745 | 56 | 519 | |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | 500 | - | - | - | - | - | - | |
| OFFICE OF EDUCATION..... | 5,975 | - | 5,915 | 60 | - | - | - | - | - | |
| SOCIAL AND REHABILITATION SERVICE..... | 3,075 | - | 3,075 | - | - | - | - | - | - | |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 62 | - | 62 | - | 5,722 | - | 5,051 | 671 | - | |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | 27 | - | - | 27 | - | |
| BUREAU OF MINES..... | - | - | - | - | 3,383 | - | 3,137 | 246 | - | |
| GEOLOGICAL SURVEY..... | - | - | - | - | 2,037 | - | 1,646 | 391 | - | |
| OFFICE OF WATER RESOURCES RESEARCH..... | 62 | - | 62 | - | 275 | - | 268 | 7 | - | |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,191 | - | 1,191 | - | 719 | - | 39 | 680 | - | |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 16 | - | 16 | - | 39 | - | 39 | - | - | |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,175 | - | 1,175 | - | 680 | - | - | 680 | - | |
| DEPARTMENT OF STATE, TOTAL..... | 103 | - | 103 | - | - | - | - | - | - | |
| PEACE CORPS..... | 103 | - | 103 | - | - | - | - | - | - | |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 2,727 | 443 | 2,284 | - | 95 | - | - | 95 | - | |
| FEDERAL AVIATION ADMINISTRATION..... | 443 | 443 | - | - | - | - | - | - | - | |
| FEDERAL RAILROAD ADMINISTRATION..... | 215 | - | 215 | - | - | - | - | - | - | |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. | - | - | - | - | - | - | - | - | - | |
| UNITED STATES COAST GUARD..... | - | - | 2,059 | - | 95 | - | - | - | - | |

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TABLE C-57. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN PSYCHOLOGY AND PHYSICAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | PSYCHOLOGY | | | | PHYSICAL SCIENCES | | | | |
|--|------------|--------------------|----------------|----------------------------|-------------------|-----------|-----------|---------|-----------------------|
| | TOTAL | BIOLOGICAL ASPECTS | SOCIAL ASPECTS | PSYCHOLOGICAL SCIENCES NEC | TOTAL | ASTRONOMY | CHEMISTRY | PHYSICS | PHYSICAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 74,436 | 21,854 | 51,031 | 1,551 | 356,497 | 10,030 | 117,210 | 216,203 | 13,054 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 26 | - | 26 | - | 21,232 | - | 16,757 | 4,475 | - |
| AGRICULTURAL RESEARCH SERVICE..... | 26 | - | 26 | - | 17,172 | - | 13,586 | 3,586 | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | - | - | - | - | 2,282 | - | 2,282 | - | - |
| FOREST SERVICE..... | - | - | - | - | 1,778 | - | 889 | 889 | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 982 | 514 | 468 | - | 6,834 | - | 4,117 | 2,710 | 7 |
| BUREAU OF THE CENSUS..... | 468 | - | 468 | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | - | - | - | - | 5,291 | - | 2,574 | 2,710 | 7 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 514 | 514 | - | - | 1,543 | - | 1,543 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 25,625 | 3,988 | 21,112 | 525 | 155,416 | 1,019 | 25,097 | 118,855 | 10,445 |
| DEPARTMENT OF THE ARMY..... | 9,137 | 3,573 | 5,564 | - | 44,691 | 11 | 19,482 | 19,278 | 5,920 |
| DEPARTMENT OF THE NAVY..... | 3,370 | - | 3,370 | - | 43,834 | 492 | 3,914 | 36,538 | 2,890 |
| DEPARTMENT OF THE AIR FORCE..... | 12,289 | 384 | 11,905 | - | 2,582 | 516 | 1,145 | 921 | - |
| DEFENSE AGENCIES..... | 525 | - | - | 525 | 63,685 | - | 550 | 61,500 | 1,635 |
| DEPARTMENT-WIDE FUNDS..... | 304 | 31 | 273 | - | 624 | - | 6 | 618 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 33,921 | 11,013 | 21,982 | 926 | 27,222 | - | 26,566 | 64 | 592 |
| FOOD AND DRUG ADMINISTRATION..... | - | - | - | - | 12,007 | - | 12,007 | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 17,411 | 7,105 | 9,380 | 926 | - | - | - | - | 592 |
| NATIONAL INSTITUTES OF HEALTH..... | 7,022 | 3,908 | 3,114 | - | 15,215 | - | 14,559 | 64 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | 500 | - | - | - | - | - | - |
| OFFICE OF EDUCATION..... | 6,568 | - | 6,568 | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 2,420 | - | 2,420 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 89 | - | 68 | - | 5,748 | - | 5,024 | 724 | - |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | 44 | - | - | 44 | - |
| BUREAU OF MINES..... | - | - | - | - | 3,270 | - | 3,009 | 261 | - |
| GEOLOGICAL SURVEY..... | 68 | - | 68 | - | 2,134 | - | 1,724 | 410 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | - | - | - | - | 300 | - | 291 | 9 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 2,115 | - | 2,115 | - | 2,864 | - | 254 | 2,610 | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | - | - | - | - | 254 | - | 254 | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 2,115 | - | 2,115 | - | 2,610 | - | - | 2,610 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 5,240 | 480 | 4,760 | - | 825 | - | - | 825 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 480 | 480 | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 250 | - | 250 | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 4,500 | - | 4,500 | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | - | - | - | - | 825 | - | - | 825 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 10 | - | 10 | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | 372 | - | 95 | 55 | 222 |
| BUREAU OF ENGRAVING AND PRINTING..... | - | - | - | - | 372 | - | 95 | 55 | 222 |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | - | - | - | - | 67,658 | - | 24,698 | 42,960 | - |
| CIVIL SERVICE COMMISSION..... | 237 | - | 237 | - | 8,265 | - | 5,538 | 1,039 | 1,688 |

TABLE C-58. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|---|---------------|------------|------------------|------------------------|-------------------|------------------------|-------------|------------|--------------|----------------------------|
| | TOTAL | BIOLOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOSPHERIC | GEOLOGICAL | OCEANOGRAPHY | ENVIRONMENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 957,391 | 257,247 | 653,950 | 32,567 | 13,627 | 234,251 | 114,608 | 64,589 | 36,657 | 18,397 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 91,014 | 89,249 | 1,712 | 53 | - | 3,265 | 1,181 | 2,084 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 49,102 | 49,049 | - | 53 | - | 583 | 143 | 440 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 26,029 | 24,317 | 1,712 | - | - | 217 | 217 | - | - | - |
| FOREST SERVICE..... | 15,883 | 15,883 | - | - | - | 2,465 | 821 | 1,644 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 17,214 | 17,214 | - | - | - | 10,519 | 6,694 | 2,231 | 1,594 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 17,214 | 17,214 | - | - | - | 10,519 | 6,694 | 2,231 | 1,594 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 75,117 | 25,401 | 25,621 | 23,920 | 175 | 78,924 | 23,422 | 21,714 | 20,400 | 13,388 |
| DEPARTMENT OF THE ARMY..... | 35,940 | 16,059 | 19,716 | - | 165 | 9,562 | 5,162 | 2,460 | 1,690 | 250 |
| DEPARTMENT OF THE NAVY..... | 5,832 | 710 | 5,112 | - | 10 | 19,814 | 1,965 | - | 17,105 | 744 |
| DEPARTMENT OF THE AIR FORCE..... | 24,507 | - | 587 | 23,920 | - | 7,931 | 7,162 | 769 | - | - |
| DEFENSE AGENCIES..... | 8,218 | 8,218 | - | - | - | 41,617 | 9,133 | 18,485 | 1,605 | 12,394 |
| DEPARTMENT-WIDE FUNDS..... | 620 | 414 | 206 | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 596,851 | 19,207 | 577,644 | - | - | 465 | - | - | - | 465 |
| FOOD AND DRUG ADMINISTRATION..... | 15,492 | 11,837 | 3,655 | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 75,908 | 7,370 | 68,538 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 493,831 | - | 493,831 | - | - | 465 | - | - | - | 465 |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | 500 | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 11,120 | - | 11,120 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 11,830 | 11,800 | - | - | 30 | 14,387 | 4,870 | 9,327 | 171 | 19 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | 31 | - | 31 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 635 | 635 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 1,648 | - | 1,587 | 61 | - |
| BUREAU OF RECLAMATION..... | 13 | - | - | - | 13 | 4,810 | 4,810 | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 9,582 | 9,582 | - | - | - | 6,602 | - | 6,506 | 96 | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,600 | 1,583 | - | - | 17 | 1,296 | 60 | 1,203 | 14 | 19 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 326 | 326 | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 326 | 326 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 14,421 | 10,497 | 3,924 | - | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 14,421 | 10,497 | 3,924 | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,145 | 1,371 | 123 | - | 1,651 | 4,249 | 400 | 50 | 1,970 | 1,829 |
| FEDERAL AVIATION ADMINISTRATION..... | 1,484 | 1,361 | 123 | - | - | 400 | 400 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 1,651 | - | - | - | 1,651 | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | 249 | - | - | - | 249 |
| UNITED STATES COAST GUARD..... | 10 | 10 | - | - | - | 2,164 | - | - | 1,970 | 194 |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | 1,436 | - | 50 | - | 1,386 |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 43,120 | 35,050 | 8,070 | - | - | 9,462 | 5,318 | 1,942 | 2,202 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 17,057 | 11,013 | 660 | 5,384 | - | 4,240 | 749 | 36 | 1,716 | 1,739 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 27,720 | 13,419 | 2,530 | - | 11,771 | 102,411 | 69,533 | 25,660 | 7,218 | - |
| NATIONAL SCIENCE FOUNDATION..... | 7,457 | 7,247 | - | 210 | - | 6,239 | 2,425 | 1,682 | 1,375 | 857 |

| | | | | | | | | | | |
|--|---------|--------|---------|--------|--------|---------|--------|--------|--------|--------|
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 91,014 | 89,249 | 1,712 | 53 | - | 3,265 | 1,181 | 2,084 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 49,102 | 49,049 | - | 53 | - | 583 | 143 | 440 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 26,029 | 24,317 | 1,712 | - | - | 217 | 217 | - | - | - |
| FOREST SERVICE..... | 15,883 | 15,883 | - | - | - | 2,465 | 821 | 1,644 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 17,214 | 17,214 | - | - | - | 10,519 | 6,694 | 2,231 | 1,594 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 17,214 | 17,214 | - | - | - | 10,519 | 6,694 | 2,231 | 1,594 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 75,117 | 25,401 | 25,621 | 23,920 | 175 | 78,924 | 23,422 | 21,714 | 20,400 | 13,388 |
| DEPARTMENT OF THE ARMY..... | 35,940 | 16,059 | 19,716 | - | 165 | 9,562 | 5,162 | 2,460 | 1,690 | 250 |
| DEPARTMENT OF THE NAVY..... | 5,832 | 710 | 5,112 | - | 10 | 19,814 | 1,965 | - | 17,105 | 744 |
| DEPARTMENT OF THE AIR FORCE..... | 24,507 | - | 587 | 23,920 | - | 7,931 | 7,162 | 769 | - | - |
| DEFENSE AGENCIES..... | 8,218 | 8,218 | - | - | - | 41,617 | 9,133 | 18,485 | 1,605 | 12,394 |
| DEPARTMENT-WIDE FUNDS..... | 620 | 414 | 206 | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 596,851 | 19,207 | 577,644 | - | - | 465 | - | - | - | 465 |
| FOOD AND DRUG ADMINISTRATION..... | 15,492 | 11,837 | 3,655 | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 75,908 | 7,370 | 68,538 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 493,831 | - | 493,831 | - | - | 465 | - | - | - | 465 |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | 500 | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 11,120 | - | 11,120 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 11,830 | 11,800 | - | - | 30 | 14,387 | 4,870 | 9,327 | 171 | 19 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | 31 | - | 31 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 635 | 635 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 1,648 | - | 1,587 | 61 | - |
| BUREAU OF RECLAMATION..... | 13 | - | - | - | - | 4,810 | 4,810 | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.... | 9,582 | 9,582 | - | - | 13 | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | 6,602 | - | 6,506 | 96 | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,600 | 1,583 | - | - | 17 | 1,296 | 60 | 1,203 | 14 | 19 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 326 | 326 | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 326 | 326 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 14,421 | 10,497 | 3,924 | - | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 14,421 | 10,497 | 3,924 | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,145 | 1,371 | 123 | - | 1,651 | 4,249 | 400 | 50 | 1,970 | 1,829 |
| FEDERAL AVIATION ADMINISTRATION..... | 1,484 | 1,361 | 123 | - | - | 400 | 400 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 1,651 | - | - | - | 1,651 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | 249 | - | - | - | 249 |
| UNITED STATES COAST GUARD..... | 10 | 10 | - | - | - | 2,164 | - | - | 1,970 | 194 |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | 1,436 | - | 50 | - | 1,386 |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 43,120 | 35,050 | 8,070 | - | - | 9,462 | 5,318 | 1,942 | 2,202 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 17,057 | 11,013 | 660 | 5,384 | - | 4,240 | 749 | 36 | 1,716 | 1,739 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 27,720 | 13,419 | 2,530 | - | 11,771 | 102,411 | 69,533 | 25,660 | 7,218 | - |
| NATIONAL SCIENCE FOUNDATION..... | 7,457 | 7,247 | - | 210 | - | 6,239 | 2,425 | 1,482 | 1,375 | 957 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 2,600 | - | 2,600 | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 170 | 104 | 66 | - | - | 50 | 16 | 23 | 11 | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 1,727 | 1,727 | - | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | - | - | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 47,622 | 13,622 | 31,000 | 3,000 | - | 40 | - | 40 | - | - |

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|--|---------------|-------------|------------------|------------------------|-------------------|------------------------|-------------|-------------|--------------|----------------------------|
| | TOTAL | BIO-LOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOSPHERIC | GEO-LOGICAL | OCEANOGRAPHY | ENVIRONMENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 1,103,977 | 279,005 | 773,237 | 33,213 | 21,522 | 270,532 | 138,355 | 71,372 | 35,668 | 25,137 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 99,211 | 97,268 | 1,879 | 64 | - | 3,514 | 1,269 | 2,245 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 53,726 | 53,662 | - | 64 | - | 618 | 150 | 466 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 28,574 | 26,695 | 1,879 | - | - | 230 | 230 | - | - | - |
| FOREST SERVICE..... | 16,911 | 16,911 | - | - | - | 2,666 | 889 | 1,777 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 22,948 | 22,948 | - | - | - | 14,024 | 8,924 | 2,975 | 2,125 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 22,948 | 22,948 | - | - | - | 14,024 | 8,924 | 2,975 | 2,125 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 65,211 | 19,511 | 21,115 | 24,261 | 324 | 76,766 | 18,993 | 22,720 | 15,535 | 19,518 |
| DEPARTMENT OF THE ARMY..... | 28,938 | 13,558 | 15,256 | - | 124 | 8,250 | 4,268 | 2,077 | 1,730 | 175 |
| DEPARTMENT OF THE NAVY..... | 5,928 | 777 | 5,151 | - | - | 14,682 | 1,726 | - | 12,291 | 665 |
| DEPARTMENT OF THE AIR FORCE..... | 24,801 | - | 540 | 24,261 | - | 6,360 | 5,743 | 617 | - | - |
| DEFENSE AGENCIES..... | 5,074 | 4,874 | - | - | 200 | 47,474 | 7,256 | 20,026 | 1,514 | 18,678 |
| DEPARTMENT-WIDE FUNDS..... | 470 | 302 | 168 | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 712,876 | 24,096 | 688,780 | - | - | 564 | - | - | - | 564 |
| FOOD AND DRUG ADMINISTRATION..... | 16,174 | 16,174 | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 91,361 | 7,922 | 83,439 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 592,011 | - | 592,011 | - | - | 564 | - | - | - | 564 |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | 500 | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 12,830 | - | 12,830 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 13,135 | 13,109 | - | - | 26 | 19,397 | 6,594 | 12,739 | 42 | 22 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | 46 | - | 46 | - | - |
| BUREAU OF LAND MANAGEMENT..... | 698 | 698 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 2,334 | - | 2,315 | 19 | - |
| BUREAU OF RECLAMATION..... | 10 | - | - | - | 10 | 6,525 | 6,525 | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 10,581 | 10,581 | - | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | 8,996 | - | 8,986 | 10 | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,846 | 1,830 | - | - | 16 | 1,496 | 69 | 1,392 | 13 | 22 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 778 | 778 | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 778 | 778 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 18,731 | 11,908 | 6,823 | - | - | 60 | - | 60 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 18,731 | 11,908 | 6,823 | - | - | 60 | - | 60 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,127 | 1,517 | 150 | 310 | 1,150 | 4,150 | 768 | 50 | 2,585 | 747 |
| FEDERAL AVIATION ADMINISTRATION..... | 1,667 | 1,517 | 150 | - | - | 768 | 768 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 310 | - | - | 310 | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 1,150 | - | - | - | 1,150 | - | - | - | - | 694 |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | 694 | - | - | - | 53 |
| UNITED STATES COAST GUARD..... | - | - | - | - | - | 2,638 | - | - | 2,585 | - |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | 50 | - | 50 | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 43,102 | 35,002 | 8,100 | - | - | 9,298 | 5,160 | 1,995 | 2,143 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 18,888 | 12,754 | 556 | 5,578 | - | 5,044 | 651 | 30 | 2,434 | 1,929 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 35,890 | 13,596 | 3,079 | - | 19,215 | 129,562 | 93,179 | 27,029 | 9,354 | - |
| NATIONAL SCIENCE FOUNDATION..... | 10,765 | 9,958 | - | - | 807 | 8,054 | 2,800 | 1,456 | 1,439 | 2,357 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 6,900 | - | 6,900 | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 182 | 111 | 71 | - | - | 53 | 17 | 25 | 11 | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 1,949 | 1,949 | - | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | - | - | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 50,284 | 14,500 | 32,784 | 3,000 | - | 46 | - | 46 | - | - |

TABLE C-60. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN LIFE AND ENVIRONMENTAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | LIFE SCIENCES | | | | | ENVIRONMENTAL SCIENCES | | | | |
|---|---------------|-------------|------------------|------------------------|-------------------|------------------------|--------------|-------------|--------------|-----------------------------|
| | TOTAL | BIO-LOGICAL | CLINICAL MEDICAL | OTHER MEDICAL SCIENCES | LIFE SCIENCES NEC | TOTAL | ATMOS-PHERIC | GEO-LOGICAL | OCEAN-OGRAHY | ENVIRON-MENTAL SCIENCES NEC |
| TOTAL, ALL AGENCIES..... | 1,209,762 | 298,736 | 844,027 | 44,233 | 22,766 | 282,734 | 142,730 | 74,913 | 37,287 | 27,804 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 103,899 | 101,726 | 2,065 | 108 | - | 3,550 | 1,306 | 2,244 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 55,338 | 55,230 | - | 108 | - | 619 | 152 | 467 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 31,377 | 29,312 | 2,065 | - | - | 265 | 265 | - | - | - |
| FOREST SERVICE..... | 17,184 | 17,184 | - | - | - | 2,666 | 889 | 1,777 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 27,772 | 27,772 | - | - | - | 16,972 | 10,800 | 3,600 | 2,572 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 27,772 | 27,772 | - | - | - | 16,972 | 10,800 | 3,600 | 2,572 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 71,733 | 19,781 | 24,034 | 27,818 | 100 | 74,634 | 20,073 | 22,481 | 15,780 | 16,300 |
| DEPARTMENT OF THE ARMY..... | 30,402 | 13,873 | 16,429 | - | 100 | 8,731 | 4,465 | 2,201 | 1,865 | 200 |
| DEPARTMENT OF THE NAVY..... | 8,285 | 855 | 7,430 | - | - | 16,078 | 3,082 | - | 12,335 | 661 |
| DEPARTMENT OF THE AIR FORCE..... | 27,818 | - | - | 27,818 | - | 6,651 | 6,006 | 645 | - | - |
| DEFENSE AGENCIES..... | 4,739 | 4,739 | - | - | - | 43,174 | 6,520 | 19,635 | 1,580 | 15,439 |
| DEPARTMENT-WIDE FUNDS..... | 489 | 314 | 175 | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 798,855 | 31,412 | 767,443 | - | - | 644 | - | - | - | 644 |
| FOOD AND DRUG ADMINISTRATION..... | 21,909 | 21,909 | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 87,234 | 9,503 | 77,731 | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 671,512 | - | 671,512 | - | - | 644 | - | - | - | 644 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | - | 1,000 | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 17,200 | - | 17,200 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 14,172 | 14,143 | - | - | 29 | 22,745 | 6,779 | 15,770 | 168 | 28 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 735 | 735 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | 772 | - | 772 | - | - |
| BUREAU OF RECLAMATION..... | 5 | - | - | - | 5 | 6,700 | 6,700 | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 11,446 | 11,446 | - | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | 13,502 | - | 13,492 | 10 | - |
| OFFICE OF THE SECRETARY..... | 1,986 | 1,962 | - | - | - | 140 | - | - | 140 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | - | - | - | - | 24 | 1,631 | 79 | 1,506 | 18 | 28 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,399 | 1,399 | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 1,399 | 1,399 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 19,219 | 12,192 | 7,027 | - | - | 200 | - | 200 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 19,219 | 12,192 | 7,027 | - | - | 200 | - | 200 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL.... | 4,805 | 1,649 | 156 | 500 | 2,500 | 7,755 | 3,000 | 50 | 2,930 | 1,775 |
| FEDERAL AVIATION ADMINISTRATION..... | 1,805 | 1,649 | 156 | - | - | 3,000 | 3,000 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 500 | - | - | 500 | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 2,500 | - | - | - | 2,500 | - | - | - | - | - |

| | | | | | | | | | | | |
|--|---------|--------|---------|--------|---|--------|---------|--------|--------|--------|--------|
| FOREST SERVICE..... | 17,184 | 17,184 | - | - | - | - | 2,666 | 889 | 1,777 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 27,772 | 27,772 | - | - | - | - | 16,972 | 10,800 | 3,600 | 2,572 | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 27,772 | 27,772 | - | - | - | - | 16,972 | 10,800 | 3,600 | 2,572 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 71,733 | 19,781 | 24,034 | 27,818 | - | 100 | 74,634 | 20,073 | 22,481 | 15,780 | 16,300 |
| DEPARTMENT OF THE ARMY..... | 30,402 | 13,873 | 16,429 | - | - | 100 | 8,731 | 4,465 | 2,201 | 1,865 | 200 |
| DEPARTMENT OF THE NAVY..... | 8,285 | 855 | 7,430 | - | - | - | 16,078 | 3,082 | - | 12,335 | 661 |
| DEPARTMENT OF THE AIR FORCE..... | 27,818 | - | - | 27,818 | - | - | 6,651 | 6,006 | 645 | - | - |
| DEFENSE AGENCIES..... | 4,739 | 4,739 | - | - | - | - | 43,174 | 6,520 | 19,635 | 1,580 | 15,439 |
| DEPARTMENT-WIDE FUNDS..... | 489 | 314 | 175 | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 798,855 | 31,412 | 767,443 | - | - | - | 644 | - | - | - | 644 |
| FOOD AND DRUG ADMINISTRATION..... | 21,909 | 21,909 | - | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 87,234 | 9,503 | 77,731 | - | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 671,512 | - | 671,512 | - | - | - | 644 | - | - | - | 644 |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | - | 1,000 | - | - | - | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 17,200 | - | 17,200 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 14,172 | 14,143 | - | - | - | 29 | 22,745 | 6,779 | 15,770 | 168 | 28 |
| BONNEVILLE POWER ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 735 | 735 | - | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | - | - | - | - | - | - | 772 | - | 772 | - | - |
| BUREAU OF RECLAMATION..... | 5 | - | - | - | - | 5 | 6,700 | 6,700 | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 11,446 | 11,446 | - | - | - | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | - | - | - | - | - | - | 13,502 | - | 13,492 | 10 | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | 140 | - | - | 140 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,986 | 1,962 | - | - | - | 24 | 1,631 | 79 | 1,506 | 18 | 28 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,399 | 1,399 | - | - | - | - | - | - | - | - | - |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 1,399 | 1,399 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 19,219 | 12,192 | 7,027 | - | - | - | 200 | - | 200 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 19,219 | 12,192 | 7,027 | - | - | - | 200 | - | 200 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 4,805 | 1,649 | 156 | 500 | - | 2,500 | 7,755 | 3,000 | 50 | 2,930 | 1,775 |
| FEDERAL AVIATION ADMINISTRATION..... | 1,805 | 1,649 | 156 | - | - | - | 3,000 | 3,000 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 500 | - | - | 500 | - | - | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 2,500 | - | - | - | - | 2,500 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | - | - | 675 | - | - | - | 675 |
| UNITED STATES COAST GUARD..... | - | - | - | - | - | - | 3,030 | - | - | 2,930 | 100 |
| URBAN MASS TRANSPORTATION ADMIN..... | - | - | - | - | - | - | 1,050 | - | 50 | - | 1,000 |
| OTHER AGENCIES | | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 43,367 | 35,457 | 7,910 | - | - | - | 9,580 | 5,520 | 1,800 | 2,260 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 22,656 | 14,889 | 539 | 7,228 | - | - | 6,310 | 647 | 29 | 3,077 | 2,557 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 35,457 | 11,114 | 977 | 5,579 | - | 17,787 | 127,802 | 90,837 | 27,668 | 9,297 | - |
| NATIONAL SCIENCE FOUNDATION..... | 12,880 | 10,530 | - | - | - | 2,350 | 12,440 | 3,750 | 1,000 | 1,190 | 6,500 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 900 | - | 900 | - | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 198 | 121 | 77 | - | - | - | 58 | 18 | 27 | 13 | - |
| SMITHSONIAN INSTITUTION..... | - | - | - | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 2,051 | 2,051 | - | - | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | - | - | - | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 50,399 | 14,500 | 32,899 | 3,000 | - | - | 44 | - | 44 | - | - |

TABLE C-61. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE,
FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AERO- NAUTICAL | ASTRO- NAUTICAL | CHEMICAL | CIVIL | ELEC- TRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGI- NEERING NEC |
|--|-----------|-------------------|--------------------|----------|--------|-----------------|------------|--------------------------------|-------------------------|
| TOTAL, ALL AGENCIES..... | 1,725,098 | 407,744 | 272,550 | 108,299 | 53,137 | 319,115 | 97,039 | 98,108 | 369,106 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 18,617 | - | - | 1,766 | 2,225 | 54 | 988 | - | 13,584 |
| AGRICULTURAL RESEARCH SERVICE..... | 12,665 | - | - | 1,492 | 1,677 | 54 | 440 | - | 9,002 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 1,297 | - | - | - | - | - | - | - | 1,297 |
| FOREST SERVICE..... | 4,655 | - | - | 274 | 548 | - | 548 | - | 3,285 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 11,802 | - | - | 956 | 3,967 | 3,726 | 563 | 391 | 2,199 |
| MARITIME ADMINISTRATION..... | 3,268 | - | - | - | 2,729 | 71 | - | - | 468 |
| NATIONAL BUREAU OF STANDARDS..... | 6,621 | - | - | - | 1,238 | 3,017 | 244 | 391 | 1,731 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 1,913 | - | - | 956 | - | 638 | 319 | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 914,022 | 162,805 | 101,977 | 35,472 | 14,932 | 247,794 | 54,952 | 51,050 | 245,040 |
| DEPARTMENT OF THE ARMY..... | 119,505 | 16,797 | 10 | 18,178 | 8,083 | 36,356 | 12,432 | 13,078 | 14,571 |
| DEPARTMENT OF THE NAVY..... | 101,232 | 11,812 | 856 | 9,976 | 3,102 | 35,356 | 21,813 | 12,617 | 5,700 |
| DEPARTMENT OF THE AIR FORCE..... | 542,529 | 125,601 | 91,678 | 5,563 | 1,570 | 130,144 | 14,952 | 24,501 | 148,520 |
| DEFENSE AGENCIES..... | 149,703 | 8,595 | 9,432 | 1,755 | 1,617 | 45,839 | 5,571 | 854 | 76,039 |
| DEPARTMENT-WIDE FUNDS..... | 1,053 | - | - | - | 560 | 99 | 184 | - | 210 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 20,380 | - | - | - | - | 87 | - | 31 | 20,262 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 87 | - | - | - | - | 87 | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 20,148 | - | - | - | - | - | - | 31 | 20,117 |
| SOCIAL AND REHABILITATION SERVICE..... | 145 | - | - | - | - | - | - | - | 145 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 7,097 | - | - | - | 6,387 | 213 | 213 | 284 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 37,579 | - | - | 14,233 | 5,347 | 2,398 | 1,557 | 12,681 | 1,363 |
| BONNEVILLE POWER ADMINISTRATION..... | 448 | - | - | - | - | 448 | - | - | - |
| BUREAU OF MINES..... | 22,205 | - | - | 7,961 | 24 | 823 | 736 | 12,661 | - |
| BUREAU OF RECLAMATION..... | 2,255 | - | - | - | 2,089 | 166 | - | - | - |
| GEOLOGICAL SURVEY..... | 1,374 | - | - | - | 1,174 | 891 | 200 | - | - |
| OFFICE OF COAL RESEARCH..... | 2,341 | - | - | 1,000 | - | - | 440 | - | 10 |
| OFFICE OF SALINE WATER..... | 5,001 | - | - | 5,001 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 3,955 | - | - | 271 | 2,060 | 70 | 181 | 20 | 1,353 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 363 | - | - | - | - | 363 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 363 | - | - | - | - | 363 | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,392 | - | - | - | 1,190 | - | 202 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 1,392 | - | - | - | 1,190 | - | 202 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 42,516 | 2,635 | - | 1,402 | 8,456 | 2,110 | 10,017 | 5,539 | 12,357 |
| FEDERAL AVIATION ADMINISTRATION..... | 7,331 | 1,915 | - | - | 180 | - | - | - | 5,426 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 20,157 | - | - | 1,008 | 6,047 | 1,008 | 2,016 | 5,019 | 5,059 |
| FEDERAL RAILROAD ADMINISTRATION..... | 4,020 | 720 | - | - | 1,093 | 1,007 | 700 | 500 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 7,166 | - | - | - | - | - | 7,166 | - | - |
| OFFICE OF THE SECRETARY..... | 1,902 | - | - | - | - | - | - | - | 1,902 |
| UNITED STATES COAST GUARD..... | 595 | - | - | 394 | 201 | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,345 | - | - | - | 935 | 95 | 135 | 20 | 160 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 16 | - | - | - | - | - | - | 16 | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 16 | - | - | - | - | - | - | 16 | - |

| | | | | | | | | | |
|--|---------|---------|---------|--------|-------|---------|--------|--------|---------|
| DEPARTMENT OF THE ARMY..... | 119,505 | 16,797 | 10 | 18,178 | 8,083 | 36,356 | 12,432 | 13,078 | 14,571 |
| DEPARTMENT OF THE NAVY..... | 101,232 | 11,812 | 856 | 9,976 | 3,102 | 35,356 | 21,813 | 12,617 | 5,700 |
| DEPARTMENT OF THE AIR FORCE..... | 542,529 | 125,601 | 91,678 | 5,563 | 1,570 | 130,144 | 14,952 | 24,501 | 148,520 |
| DEFENSE AGENCIES..... | 149,703 | 8,595 | 9,433 | 1,755 | 1,617 | 45,839 | 5,571 | 854 | 76,039 |
| DEPARTMENT-WIDE FUNDS..... | 1,053 | - | - | - | 560 | 99 | 184 | - | 210 |
| DEPT. OF HEALTH, EDUC., & WELFARE, TOTAL | 20,380 | - | - | - | - | 87 | - | 31 | 20,262 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 87 | - | - | - | - | 87 | - | 31 | 20,117 |
| NATIONAL INSTITUTES OF HEALTH..... | 20,148 | - | - | - | - | - | - | - | 145 |
| SOCIAL AND REHABILITATION SERVICE..... | 145 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 7,097 | - | - | - | 6,387 | 213 | 213 | 284 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 37,579 | - | - | 14,233 | 5,347 | 2,398 | 1,557 | 12,681 | 1,363 |
| BONNEVILLE POWER ADMINISTRATION..... | 448 | - | - | - | - | 448 | - | - | - |
| BUREAU OF MINES..... | 22,205 | - | - | 7,961 | 24 | 823 | 736 | 12,661 | - |
| BUREAU OF RECLAMATION..... | 2,255 | - | - | - | 2,089 | 166 | - | - | - |
| GEOLOGICAL SURVEY..... | 1,374 | - | - | - | 1,174 | - | 200 | - | - |
| OFFICE OF COAL RESEARCH..... | 2,341 | - | - | 1,000 | - | 891 | 440 | - | 10 |
| OFFICE OF SALINE WATER..... | 5,001 | - | - | 5,001 | - | 70 | 181 | 20 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 3,955 | - | - | 271 | 2,760 | - | - | - | 1,353 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 363 | - | - | - | - | 363 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 363 | - | - | - | - | 363 | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,392 | - | - | - | 1,190 | - | 202 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 1,392 | - | - | - | 1,190 | - | 202 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 42,516 | 2,635 | - | 1,402 | 8,456 | 2,110 | 10,017 | 5,539 | 12,357 |
| FEDERAL AVIATION ADMINISTRATION..... | 7,331 | 1,915 | - | - | 180 | - | - | - | 5,236 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 20,157 | - | - | 1,008 | 6,047 | 1,008 | 2,016 | 5,019 | 5,059 |
| FEDERAL RAILROAD ADMINISTRATION..... | 4,020 | 720 | - | - | 1,093 | 1,007 | 700 | 500 | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 7,166 | - | - | - | - | - | 7,166 | - | - |
| OFFICE OF THE SECRETARY..... | 1,902 | - | - | 394 | 201 | - | - | - | 1,902 |
| UNITED STATES COAST GUARD..... | 595 | - | - | - | 935 | 95 | 135 | 20 | 160 |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,345 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 16 | - | - | - | - | - | - | 16 | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 16 | - | - | - | - | - | - | 16 | - |
| OTHER AGENCIES | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 24,554 | - | - | 4,350 | 7,870 | - | - | 18,900 | 1,304 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 19,586 | - | 137 | 6,747 | - | 197 | 4,635 | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 1,015 | - | - | - | - | 1,015 | - | - | - |
| GENERAL SERVICES ADMINISTRATION..... | 194 | - | - | - | 194 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 614,360 | 242,279 | 170,411 | 41,220 | 116 | 59,417 | 22,401 | 8,863 | 69,653 |
| NATIONAL SCIENCE FOUNDATION..... | 4,258 | - | - | 830 | 380 | 1,030 | 1,488 | 330 | 200 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 531 | - | - | - | - | 531 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 167 | 25 | 25 | 25 | 23 | 23 | 23 | 23 | - |
| TENNESSEE VALLEY AUTHORITY..... | 3,406 | - | - | 1,298 | 2,050 | - | - | - | 58 |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 2,811 | - | - | - | - | - | - | - | 2,811 |
| UNITED STATES INFORMATION AGENCY..... | 157 | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 275 | - | - | - | - | 157 | - | - | 275 |

TABLE C-62. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AERO- NAUTICAL | ASTRO- NAUTICAL | CHEMICAL | CIVIL | ELEC- TRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGI- NEERING NEC |
|---|------------------|-------------------|--------------------|-------------|-----------------|-----------------|--------------|--------------------------------|-------------------------|
| TOTAL, ALL AGENCIES..... | 1,774,211 | 414,083 | 272,920 | 104,546 | 73,467 | 321,299 | 105,369 | 101,851 | 380,676 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 20,377 | - | - | 1,994 | 2,371 | 38 | 1,079 | - | 14,895 |
| AGRICULTURAL RESEARCH SERVICE..... | 13,917 | - | - | 1,698 | 1,779 | 38 | 487 | - | 9,915 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 1,423 | - | - | - | - | - | - | - | 1,423 |
| FOREST SERVICE..... | 5,037 | - | - | 296 | 592 | - | 592 | - | 3,557 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 25,882 | - | - | 1,275 | 12,498 | 7,027 | 2,264 | 408 | 2,410 |
| MARITIME ADMINISTRATION..... | 15,905 | - | - | - | 11,175 | 2,544 | 1,584 | - | 602 |
| NATIONAL BUREAU OF STANDARDS..... | 6,943 | - | - | - | 1,323 | 3,149 | 255 | 408 | 1,808 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | 2,550 484 | - - | - - | 1,275 - | - - | 850 484 | 425 - | - - | - - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 861,585 | 140,547 | 89,268 | 32,881 | 16,192 | 244,187 | 50,472 | 50,559 | 236,679 |
| DEPARTMENT OF THE ARMY..... | 108,026 | 17,151 | - | 12,907 | 7,117 | 31,229 | 10,986 | 12,626 | 16,010 |
| DEPARTMENT OF THE NAVY..... | 99,401 | 10,819 | 1,233 | 11,487 | 3,975 | 35,417 | 18,623 | 12,874 | 4,982 |
| DEPARTMENT OF THE AIR FORCE..... | 519,233 | 105,105 | 83,836 | 6,577 | 3,520 | 136,970 | 17,859 | 24,169 | 141,197 |
| DEFENSE AGENCIES..... | 134,036 | 7,481 | 4,199 | 1,910 | 1,866 | 40,512 | 2,898 | 890 | 74,280 |
| DEPARTMENT-WIDE FUNDS..... | 889 | - | - | - | 514 | 59 | 106 | - | 210 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 24,530 | - | - | - | - | 66 | - | 36 | 24,428 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. NATIONAL INSTITUTES OF HEALTH..... | 66 24,314 | - - | - - | - - | - - | 66 - | - - | 36 - | 24,278 |
| SOCIAL AND REHABILITATION SERVICE..... | 150 | - | - | - | - | - | - | - | 150 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. DEPARTMENT OF THE INTERIOR, TOTAL..... | 11,862 42,604 | - - | - - | - 12,953 | 10,676 5,788 | 356 3,297 | 356 2,525 | 474 15,580 | - 2,461 |
| BONNEVILLE POWER ADMINISTRATION..... | 381 | - | - | - | - | 381 | - | - | - |
| BUREAU OF MINES..... | 25,139 | - | - | 8,042 | 24 | 1,334 | 1,126 | 14,613 | - |
| BUREAU OF RECLAMATION..... | 2,374 | - | - | - | 2,203 | 171 | - | - | - |
| GEOLOGICAL SURVEY..... | 1,391 | - | - | - | 1,191 | - | 200 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,809 | - | - | 1,209 | - | 750 | 1,000 | 950 | 900 |
| OFFICE OF SALINE WATER..... | 3,400 | - | - | 3,400 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 583 | - | - | - | - | 583 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 4,527 | - | - | 302 | 2,370 | 78 | 199 | 17 | 1,561 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 363 | - | - | - | - | 363 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 363 | - | - | - | - | 363 | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,210 | - | - | - | 1,021 | - | 189 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 1,210 | - | - | - | - | - | - | - | - |



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TABLE C-63. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN ENGINEERING, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | AERO-NAUTICAL | ASTRO-NAUTICAL | CHEMICAL | CIVIL | ELEC-TRICAL | MECHANICAL | METALLURGY AND MATERIALS | ENGI-NEERING NEC |
|---|-----------|---------------|----------------|----------|--------|-------------|------------|--------------------------|------------------|
| TOTAL, ALL AGENCIES..... | 1,949,663 | 423,502 | 314,639 | 111,157 | 88,545 | 359,830 | 102,009 | 106,600 | 442,381 |
| DEPARTMENTS | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 20,565 | - | - | 2,047 | 2,369 | 38 | 1,081 | - | 15,030 |
| AGRICULTURAL RESEARCH SERVICE..... | 13,964 | - | - | 1,751 | 1,777 | 38 | 489 | - | 9,909 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 1,564 | - | - | - | - | - | - | - | 1,564 |
| FOREST SERVICE..... | 5,037 | - | - | 296 | 592 | - | 592 | - | 3,557 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 26,065 | - | - | 1,543 | 14,168 | 5,645 | 769 | 408 | 3,532 |
| MARITIME ADMINISTRATION..... | 13,895 | - | - | - | 12,320 | - | - | - | 1,575 |
| NATIONAL BUREAU OF STANDARDS..... | 7,615 | - | - | - | 1,848 | 3,147 | 255 | 408 | 1,957 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. OFFICE OF TELECOMMUNICATIONS..... | 3,086 | - | - | 1,543 | - | 1,029 | 514 | - | - |
| | 1,469 | - | - | - | - | 1,469 | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 957,306 | 144,863 | 101,973 | 38,999 | 20,960 | 284,636 | 47,233 | 57,051 | 261,591 |
| DEPARTMENT OF THE ARMY..... | 119,791 | 18,494 | - | 16,360 | 7,545 | 37,529 | 12,036 | 13,408 | 14,419 |
| DEPARTMENT OF THE NAVY..... | 106,657 | 10,921 | 1,006 | 12,186 | 7,820 | 32,951 | 18,977 | 17,356 | 5,440 |
| DEPARTMENT OF THE AIR FORCE..... | 567,251 | 112,448 | 96,532 | 6,653 | 2,820 | 169,188 | 12,359 | 25,387 | 141,864 |
| DEFENSE AGENCIES..... | 162,682 | 3,000 | 4,435 | 3,800 | 2,240 | 44,907 | 3,750 | 900 | 99,650 |
| DEPARTMENT-WIDE FUNDS..... | 925 | - | - | - | 535 | 61 | 111 | - | 218 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 27,894 | - | - | - | - | 44 | - | 41 | 27,809 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. NATIONAL INSTITUTES OF HEALTH..... | 44 | - | - | - | - | 44 | - | 41 | 27,709 |
| SOCIAL AND REHABILITATION SERVICE..... | 27,750 | - | - | - | - | - | - | - | 100 |
| | 100 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF HOUSING & URBAN DEVELOPMENT..... | 12,740 | - | - | - | 11,466 | 382 | 382 | 510 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 45,693 | - | 3,775 | 10,732 | 7,582 | 3,131 | 1,815 | 16,160 | 2,498 |
| BONNEVILLE POWER ADMINISTRATION..... | 431 | - | - | 9,033 | - | 431 | - | - | - |
| BUREAU OF MINES..... | 27,314 | - | - | - | 1,343 | 789 | 1,335 | 14,814 | - |
| BUREAU OF RECLAMATION..... | 2,708 | - | - | - | 2,538 | 170 | - | - | - |
| GEOLOGICAL SURVEY..... | 1,460 | - | - | - | 1,250 | - | 210 | - | - |
| OFFICE OF COAL RESEARCH..... | 4,059 | - | - | 1,259 | - | 750 | - | 1,150 | 900 |
| OFFICE OF SALINE WATER..... | 3,775 | - | 3,775 | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 1,053 | - | - | 75 | - | 818 | - | 160 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 4,893 | - | - | 365 | 2,451 | 173 | 270 | 36 | 1,598 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,990 | - | - | - | - | 1,990 | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 1,990 | - | - | - | - | 1,990 | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,705 | - | - | - | 1,455 | - | 250 | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 1,705 | - | - | - | 1,455 | - | 250 | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 123,865 | 3,500 | 200 | 1,332 | 14,732 | 2,085 | 18,213 | 5,938 | 77,865 |
| FEDERAL AVIATION ADMINISTRATION..... | 54,586 | 3,500 | - | - | 300 | - | - | - | 50,786 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 23,284 | - | - | 1,164 | 6,985 | 1,165 | 2,328 | 5,798 | 5,844 |
| FEDERAL RAILROAD ADMINISTRATION..... | 5,765 | - | - | - | 2,420 | 900 | 2,000 | 120 | 325 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. OFFICE OF THE SECRETARY..... | 12,750 | - | - | - | - | - | 12,750 | - | - |
| UNITED STATES COAST GUARD..... | 20,750 | - | - | 168 | 4,362 | - | - | - | 20,750 |
| URBAN MASS TRANSPORTATION ADMIN..... | 4,730 | - | 200 | - | 665 | 20 | 1,135 | 20 | 160 |
| | 2,000 | - | - | - | - | - | - | - | - |



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TABLE C-64. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|---|---------|-------------------|-----------|---------|------------------|----------------------|-----------|---------------------------|
| TOTAL, ALL AGENCIES..... | 149,734 | 713 | 58,396 | 118 | 178 | 3,658 | 25,365 | 61,306 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 23,594 | - | 22,468 | 106 | - | - | 867 | 153 |
| AGRICULTURAL RESEARCH SERVICE..... | 940 | - | 851 | - | - | - | 41 | 48 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 8,416 | - | 7,970 | - | - | - | 446 | - |
| ECONOMIC RESEARCH SERVICE..... | 10,582 | - | 10,265 | 106 | - | - | 106 | 105 |
| FARMER COOPERATIVE SERVICE..... | 663 | - | 653 | - | - | - | - | - |
| FOREST SERVICE..... | 2,739 | - | 2,465 | - | - | - | 274 | - |
| STATISTICAL REPORTING SERVICE..... | 254 | - | 254 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 6,459 | - | 6,063 | - | - | - | 396 | - |
| BUREAU OF THE CENSUS..... | 811 | - | 415 | - | - | - | 396 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 3,809 | - | 3,809 | - | - | - | - | - |
| MARITIME ADMINISTRATION..... | 1,521 | - | 1,521 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 316 | - | 316 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 2,878 | - | 646 | - | - | 890 | 850 | 492 |
| DEPARTMENT OF THE ARMY..... | 2,154 | - | 425 | - | - | 855 | 814 | 60 |
| DEFENSE AGENCIES..... | 398 | - | - | - | - | - | - | 398 |
| DEPARTMENT-WIDE FUNDS..... | 326 | - | 221 | - | - | 35 | 36 | 34 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 61,840 | 711 | - | - | 178 | - | 10,415 | 50,536 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 9,734 | 711 | - | - | - | - | 8,564 | 461 |
| NATIONAL INSTITUTES OF HEALTH..... | 262 | - | - | - | 178 | - | 84 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 500 | - | - | - | - | - | - | 500 |
| OFFICE OF EDUCATION..... | 20,729 | - | - | - | - | - | - | 20,729 |
| SOCIAL AND REHABILITATION SERVICE..... | 18,647 | - | - | - | - | - | 1,767 | 16,880 |
| SOCIAL SECURITY ADMINISTRATION..... | 11,966 | - | - | - | - | - | - | 11,966 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,144 | - | 726 | 10 | - | 141 | 156 | 111 |
| BUREAU OF LAND MANAGEMENT..... | 60 | - | 60 | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 92 | - | 62 | - | - | 5 | 20 | 5 |
| BUREAU OF RECLAMATION..... | 42 | - | 42 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 950 | - | 562 | 10 | - | 136 | 136 | 106 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 2,536 | - | - | - | - | 95 | 1,087 | 1,354 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 399 | - | - | - | - | - | 399 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 2,137 | - | - | - | - | 95 | 688 | 1,354 |
| DEPARTMENT OF LABOR, TOTAL..... | 9,234 | - | 9,234 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 1,144 | - | 1,144 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 5,874 | - | 5,874 | - | - | - | - | - |

OTHER AGENCIES

TABLE C-65. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|--|---------|-------------------|-----------|---------|------------------|----------------------|-----------|---------------------------|
| TOTAL, ALL AGENCIES..... | 191,573 | 1,164 | 58,949 | 128 | 215 | 2,665 | 33,259 | 95,193 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 25,241 | - | 24,035 | 111 | - | - | 937 | 158 |
| AGRICULTURAL RESEARCH SERVICE..... | 936 | - | 849 | - | - | - | 40 | 47 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 9,235 | - | 8,746 | - | - | - | 489 | - |
| ECONOMIC RESEARCH SERVICE..... | 11,138 | - | 10,804 | 111 | - | - | 112 | 111 |
| FARMER COOPERATIVE SERVICE..... | 709 | - | 709 | - | - | - | - | - |
| FOREST SERVICE..... | 2,963 | - | 2,667 | - | - | - | 296 | - |
| STATISTICAL REPORTING SERVICE..... | 260 | - | 260 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 4,906 | - | 4,393 | - | - | - | 513 | - |
| BUREAU OF THE CENSUS..... | 1,049 | - | 536 | - | - | - | 513 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,844 | - | 1,844 | - | - | - | - | - |
| MARITIME ADMINISTRATION..... | 1,588 | - | 1,588 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 425 | - | 425 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 2,436 | - | 628 | - | - | 555 | 968 | 285 |
| DEPARTMENT OF THE ARMY..... | 1,746 | - | 490 | - | - | 545 | 666 | 45 |
| DEFENSE AGENCIES..... | 240 | - | - | - | - | - | - | 240 |
| DEPARTMENT-WIDE FUNDS..... | 450 | - | 138 | - | - | 10 | 302 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 94,230 | 1,162 | - | - | 215 | - | 12,264 | 80,589 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 13,377 | 1,162 | - | - | - | - | 9,786 | 2,429 |
| NATIONAL INSTITUTES OF HEALTH..... | 318 | - | - | - | 215 | - | 103 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | - | - | - | - | - | 500 | 500 |
| OFFICE OF EDUCATION..... | 50,308 | - | - | - | - | - | - | 50,308 |
| SOCIAL AND REHABILITATION SERVICE..... | 16,145 | - | - | - | - | - | 1,875 | 14,270 |
| SOCIAL SECURITY ADMINISTRATION..... | 13,082 | - | - | - | - | - | - | 13,082 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,353 | - | 844 | 15 | - | 178 | 187 | 129 |
| BUREAU OF LAND MANAGEMENT..... | 57 | - | 57 | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 133 | - | 68 | 5 | - | 20 | 30 | 10 |
| BUREAU OF RECLAMATION..... | 65 | - | 65 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,098 | - | 654 | 10 | - | 158 | 157 | 119 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 2,864 | - | - | - | - | 80 | 1,427 | 1,357 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 727 | - | - | - | - | - | 727 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 2,137 | - | - | - | - | 80 | 700 | 1,357 |
| DEPARTMENT OF LABOR, TOTAL..... | 9,917 | - | 9,917 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 1,154 | - | 1,154 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,213 | - | 6,213 | - | - | - | - | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,550 | - | 2,550 | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 5,255 | - | 1,812 | - | - | 153 | 1,663 | 1,627 |
| DEPARTMENTAL FUNDS..... | 350 | - | - | - | - | - | - | 350 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 4,905 | - | 1,812 | - | - | 153 | 1,663 | 1,277 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 10,711 | - | 8,115 | - | - | 605 | 816 | 1,175 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,113 | - | 445 | - | - | - | 668 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 3,335 | - | 2,905 | - | - | 430 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 75 | - | - | - | - | 75 | - | - |
| OFFICE OF THE SECRETARY..... | 4,900 | - | 4,400 | - | - | - | - | 500 |

| | | | | | | | | | |
|--|--------|-------|----|-------|---|-----|---|--------|--------|
| DEPARTMENT OF COMMERCE, TOTAL..... | 4,906 | - | - | 4,393 | - | - | - | 513 | - |
| BUREAU OF THE CENSUS..... | 1,049 | - | - | 536 | - | - | - | 513 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,844 | - | - | 1,844 | - | - | - | - | - |
| MARITIME ADMINISTRATION..... | 1,588 | - | - | 1,588 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 425 | - | - | 425 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 2,436 | - | - | 628 | - | - | - | 568 | 285 |
| DEPARTMENT OF THE ARMY..... | 1,746 | - | - | 490 | - | - | - | 666 | 45 |
| DEFENSE AGENCIES..... | 240 | - | - | - | - | - | - | - | 240 |
| DEPARTMENT-WIDE FUNDS..... | 450 | - | - | 138 | - | - | - | 302 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 94,230 | 1,162 | - | - | - | 215 | - | 12,264 | 80,589 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 13,377 | 1,162 | - | - | - | 215 | - | 9,786 | 2,429 |
| NATIONAL INSTITUTES OF HEALTH..... | 318 | - | - | - | - | - | - | 103 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 1,000 | - | - | - | - | - | - | 500 | 500 |
| OFFICE OF EDUCATION..... | 50,308 | - | - | - | - | - | - | - | 50,308 |
| SOCIAL AND REHABILITATION SERVICE..... | 16,145 | - | - | - | - | - | - | 1,875 | 14,270 |
| SOCIAL SECURITY ADMINISTRATION..... | 13,082 | - | - | - | - | - | - | - | 13,082 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,353 | - | 15 | 844 | - | - | - | 187 | 129 |
| BUREAU OF LAND MANAGEMENT..... | 57 | - | - | 57 | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 133 | - | 5 | 68 | - | - | - | 30 | 10 |
| BUREAU OF RECLAMATION..... | 65 | - | - | 65 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,098 | - | 10 | 654 | - | - | - | 157 | 119 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 2,864 | - | - | - | - | - | - | 1,427 | 1,357 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 727 | - | - | - | - | - | - | 727 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 2,137 | - | - | - | - | - | - | 700 | 1,357 |
| DEPARTMENT OF LABOR, TOTAL..... | 9,917 | - | - | 9,917 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 1,154 | - | - | 1,154 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,213 | - | - | 6,213 | - | - | - | - | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,550 | - | - | 2,550 | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 5,255 | - | - | 1,812 | - | - | - | 1,663 | 1,627 |
| DEPARTMENTAL FUNDS..... | 350 | - | - | - | - | - | - | - | 350 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 4,905 | - | - | 1,812 | - | - | - | 1,663 | 1,277 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 10,711 | - | - | 8,115 | - | - | - | 816 | 1,175 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,113 | - | - | 445 | - | - | - | 668 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 3,335 | - | - | 2,905 | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN..... | 75 | - | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 4,900 | - | - | 4,400 | - | - | - | - | 500 |
| URBAN MASS TRANSPORTATION ADMIN..... | 1,288 | - | - | 365 | - | - | - | 448 | 575 |
| OTHER AGENCIES | | | | | | | | | |
| ADVISORY COMM ON INTERGOVT RELATIONS... | 477 | - | - | 215 | - | - | - | 262 | - |
| CIVIL AERONAUTICS BOARD..... | 270 | - | - | 270 | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 664 | - | - | 496 | - | - | - | 53 | 115 |
| FEDERAL HOME LOAN BANK BOARD..... | 388 | - | - | 388 | - | - | - | - | - |
| FEDERAL TRADE COMMISSION..... | 467 | - | - | 467 | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 6,370 | - | - | 1,088 | - | - | - | 738 | 4,114 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 24,850 | - | - | 5,500 | - | - | - | 13,850 | 5,500 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 11 | 2 | 2 | 2 | - | - | - | 1 | 1 |
| TENNESSEE VALLEY AUTHORITY..... | 428 | - | - | 428 | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 585 | - | - | 351 | - | - | - | 91 | 143 |
| VETERANS ADMINISTRATION..... | 150 | - | - | - | - | - | - | 150 | - |

TABLE C-66. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN SOCIAL SCIENCES, BY AGENCY AND DETAILED FIELD OF SCIENCE, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | ANTHRO- POLOGY | ECONOMICS | HISTORY | LIN- GUISTICS | POLITICAL SCIENCE | SOCIOLOGY | SOCIAL SCIENCES NEC |
|--|---------|-------------------|-----------|---------|------------------|----------------------|-----------|---------------------------|
| TOTAL, ALL AGENCIES..... | 211,167 | 3,666 | 65,168 | 130 | 386 | 3,049 | 51,335 | 87,433 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 25,966 | - | 24,717 | 110 | - | - | 982 | 157 |
| AGRICULTURAL RESEARCH SERVICE..... | 937 | - | 850 | - | - | - | 40 | 47 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 10,145 | - | 9,608 | - | - | - | 537 | - |
| ECONOMIC RESEARCH SERVICE..... | 10,954 | - | 10,625 | 110 | - | - | 109 | 110 |
| FARMER COOPERATIVE SERVICE..... | 707 | - | 707 | - | - | - | - | - |
| FOREST SERVICE..... | 2,963 | - | 2,667 | - | - | - | 296 | - |
| STATISTICAL REPORTING SERVICE..... | 260 | - | 260 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 3,574 | - | 3,125 | - | - | - | 449 | - |
| BUREAU OF THE CENSUS..... | 918 | - | 469 | - | - | - | 449 | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,591 | - | 1,591 | - | - | - | - | - |
| MARITIME ADMINISTRATION..... | 550 | - | 550 | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN..... | 515 | - | 515 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 6,317 | 25 | 868 | - | - | 760 | 4,314 | 350 |
| DEPARTMENT OF THE ARMY..... | 5,500 | 25 | 725 | - | - | 750 | 4,000 | 350 |
| DEFENSE AGENCIES..... | 350 | - | - | - | - | - | - | - |
| DEPARTMENTWIDE FUNDS..... | 467 | - | 143 | - | - | 10 | 314 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 86,488 | 917 | 500 | - | 386 | - | 12,762 | 71,923 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN..... | 12,679 | 917 | - | - | - | - | 10,310 | 1,452 |
| NATIONAL INSTITUTES OF HEALTH..... | 363 | - | - | - | 246 | - | 117 | - |
| OFFICE OF CHILD DEVELOPMENT..... | 2,000 | - | 500 | - | - | - | 500 | 1,000 |
| OFFICE OF EDUCATION..... | 45,430 | - | - | - | 140 | - | - | 45,290 |
| SOCIAL AND REHABILITATION SERVICE..... | 12,210 | - | - | - | - | - | 1,835 | 10,375 |
| SOCIAL SECURITY ADMINISTRATION..... | 13,806 | - | - | - | - | - | - | 13,806 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,378 | - | 845 | 18 | - | 188 | 204 | 123 |
| BUREAU OF LAND MANAGEMENT..... | 58 | - | 58 | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 76 | - | 45 | 3 | - | 5 | 20 | 3 |
| BUREAU OF RECLAMATION..... | 80 | - | 80 | - | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 1,164 | - | 662 | 15 | - | 183 | 184 | 120 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 5,146 | - | - | - | - | 240 | 2,206 | 2,700 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS LAW ENFORCEMENT ASSISTANCE ADMIN..... | 471 | - | - | - | - | - | 471 | - |
| | 4,675 | - | - | - | - | 240 | 1,735 | 2,700 |
| DEPARTMENT OF LABOR, TOTAL..... | 9,930 | - | 9,930 | - | - | - | - | - |
| BUREAU OF LABOR STATISTICS..... | 1,154 | - | 1,154 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 6,243 | - | 6,243 | - | - | - | - | - |
| WORKPLACE STANDARDS ADMINISTRATION..... | 2,533 | - | - | - | - | - | - | - |

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TABLE C-67. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1970
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|---|-----------|--------------------|-------------------------------|-----------------------------------|-------------------------|--|-------------------------------|--|--------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVERSITIES & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 9,727,910 | 1,842,692 | 6,656,472 | 357,810 | 121,308 | 332,468 | 194,116 | 204,040 | 10,545 | 8,459 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 9,232 | 8,263 | 726 | - | 119 | - | 124 | - | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 8,167 | 7,198 | 726 | - | 119 | - | 124 | - | - | - |
| FOREST SERVICE..... | 856 | 856 | - | - | - | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 209 | 209 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 27,457 | 11,986 | 11,358 | - | 1,312 | - | 290 | - | 2,216 | 295 |
| BUREAU OF THE CENSUS..... | 1,373 | 1,373 | - | - | - | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 4,953 | 863 | 813 | - | 1,204 | - | 182 | - | 1,891 | - |
| MARITIME ADMINISTRATION..... | 7,673 | 6 | 7,667 | - | - | - | - | - | - | 295 |
| NATIONAL BUREAU OF STANDARDS..... | 2,510 | 2,215 | - | - | - | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. PATENT OFFICE..... | 10,838 | 7,449 | 2,878 | - | 108 | - | 108 | - | 325 | - |
| | 110 | 110 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 5,803,585 | 1,413,358 | 4,053,123 | 11,235 | 33,063 | 101,094 | 59,333 | 126,960 | - | 5,419 |
| DEPARTMENT OF THE ARMY..... | 1,368,282 | 416,685 | 891,809 | - | 6,732 | 23,632 | 16,547 | 11,146 | - | 1,731 |
| DEPARTMENT OF THE NAVY..... | 1,984,986 | 551,551 | 1,352,241 | - | 20,388 | 51,071 | 6,302 | - | - | 3,433 |
| DEPARTMENT OF THE AIR FORCE..... | 2,324,957 | 394,164 | 1,752,914 | - | 4,128 | 26,170 | 33,762 | 113,564 | - | 255 |
| DEFENSE AGENCIES..... | 125,360 | 50,956 | 56,159 | 11,235 | 1,815 | 221 | 2,722 | 2,250 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 91,704 | 10,275 | 4,801 | - | 24,672 | 3,098 | 21,099 | 25,165 | 1,471 | 523 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. NATIONAL INSTITUTES OF HEALTH..... | 28,054 | 6,414 | 2,182 | - | 12,097 | - | 7,335 | - | - | 26 |
| OFFICE OF CHILD DEVELOPMENT..... | 4,485 | 682 | 1,892 | - | 1,556 | 98 | 186 | 59 | - | 12 |
| OFFICE OF EDUCATION..... | 1,000 | 50 | - | - | 700 | - | 250 | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 55,115 | 3,679 | 727 | - | 9,478 | 3,000 | 12,253 | 25,106 | 872 | - |
| | 3,050 | 50 | - | - | 841 | - | 1,075 | - | 599 | 485 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP. DEPARTMENT OF THE INTERIOR, TOTAL..... | 22,843 | 3,654 | 15,076 | 300 | 510 | - | 2,057 | 165 | 1,081 | - |
| | 36,216 | 14,681 | 18,881 | 997 | 583 | - | 1,068 | - | - | 6 |
| BONNEVILLE POWER ADMINISTRATION..... | 1,269 | 699 | 504 | - | 60 | - | - | - | - | 6 |
| BUREAU OF LAND MANAGEMENT..... | 22 | 22 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | 12,563 | 8,713 | 3,850 | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 108 | 108 | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 1,967 | 1,967 | - | - | - | - | - | - | - | - |
| OFFICE OF COAL RESEARCH..... | 3,330 | 62 | 1,875 | - | 325 | - | 1,068 | - | - | - |
| OFFICE OF SALINE WATER..... | 16,957 | 3,110 | 12,652 | 997 | 198 | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 3,256 | 738 | 797 | - | 103 | - | 481 | - | 1,137 | - |
| BUREAU OF PRISONS..... | 200 | 160 | 5 | - | - | - | 10 | - | 25 | - |
| FEDERAL BUREAU OF INVESTIGATION..... | 197 | 115 | 82 | - | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 2,859 | 463 | 710 | - | 103 | - | 471 | - | 1,112 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 9,301 | 2,021 | 805 | - | 2,013 | - | 2,335 | - | 1,127 | - |
| BUREAU OF LABOR STATISTICS..... | 1,249 | 1,249 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 8,052 | 1,772 | 805 | - | 2,013 | - | 2,335 | - | 1,127 | - |

TABLE C-67. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | FOREIGN | |
|---|------------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|---------|------------|
| | | | EXTRAMURAL | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | | OTHER |
| POSTAL SERVICE..... | 34,103 | 5,865 | 27,867 | - | - | - | - | - | - | 371 |
| DEPARTMENT OF STATE, TOTAL..... | 8,663 | 762 | 110 | - | 2,962 | - | 3,081 | - | - | 1,748 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... PEACE CORPS..... | 8,661 2 | 762 - | 110 - | - - | 2,960 2 | - - | 3,081 - | - - | - - | 1,748 - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 229,059 | 32,397 | 189,573 | - | 298 | - | 597 | 2,932 | 3,262 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 46,127 | 25,920 | 17,959 | - | - | - | - | 2,248 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 4,237 | 975 | - | - | - | - | - | 684 | 3,262 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 6,797 | 200 | 5,615 | - | 298 | - | - | - | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 3,600 | 8 | 3,592 | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 160,520 | 3,820 | 156,700 | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 4,508 | 1,467 | 2,984 | - | - | - | 57 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 3,270 | 7 | 2,723 | - | - | - | 540 | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 324 | 324 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 324 | 324 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 912,872 | 12,692 | 295,472 | 343,016 | 3,742 | 203,312 | 4,871 | 48,573 | 151 | 43 |
| CIVIL SERVICE COMMISSION..... | 164 | 169 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 35,522 | 7,486 | 21,006 | - | 3,261 | 1,048 | 1,681 | 140 | 60 | - |
| GENERAL SERVICES ADMINISTRATION..... | 110 | 28 | 82 | - | - | - | - | - | - | - |
| LIBRARY OF CONGRESS..... | 964 | 964 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 2,390,214 | 308,391 | 2,012,602 | 2,262 | 34,513 | 23,916 | 8,371 | 105 | - | 54 |
| NATIONAL SCIENCE FOUNDATION..... | 14,189 | 1,200 | - | - | 4,711 | - | 8,238 | - | 40 | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 93,983 | 2,200 | 2,072 | - | 9,271 | - | 80,440 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 929 | 929 | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 1,775 | 1,775 | - | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 513 | 503 | 10 | - | - | - | - | - | - | - |
| UNITED STATES INFORMATION AGENCY..... | 77 | 21 | 56 | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 850 | 410 | 215 | - | 175 | - | 50 | - | - | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-68. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|---|------------------|--------------------|-------------------------------|---------------------------------------|---------------------------------|---|--|--|------------|-----------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN- BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS BY NON- PROFIT INSTI- TUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 9,392,086 | 1,826,683 | 6,313,073 | 406,538 | 145,869 | 334,136 | 168,279 | 162,481 | 22,639 | 12,388 |
| DEPARTMENTS | 10,147 | 9,625 | 404 | - | 56 | - | 62 | - | - | - |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 9,015 | 8,493 | 404 | - | 56 | - | 62 | - | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 917 | - | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 215 | 215 | - | - | - | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | | | | | | | | | | |
| DEPARTMENT OF COMMERCE, TOTAL..... | 29,811 | 12,831 | 13,307 | - | 2,114 | - | 344 | - | 954 | 261 |
| BUREAU OF THE CENSUS..... | 2,094 | 2,094 | - | - | - | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 3,602 | 902 | 780 | - | 1,200 | - | 200 | - | 520 | - |
| MARITIME ADMINISTRATION..... | 6,807 | 12 | 6,025 | - | 770 | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 2,754 | 2,493 | - | - | - | - | - | - | - | 261 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. PATENT OFFICE..... | 14,449 105 | 7,225 105 | 6,502 - | - | 144 - | - | 144 - | - | 434 - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 5,940,884 | 1,425,392 | 4,176,175 | 6,200 | 27,864 | 113,067 | 51,214 | 126,419 | 9,467 | 5,086 |
| DEPARTMENT OF THE ARMY..... | 1,434,857 | 452,407 | 912,553 | - | 5,180 | 28,420 | 13,054 | 13,171 | 9,467 | 605 |
| DEPARTMENT OF THE NAVY..... | 1,968,894 | 574,610 | 1,311,515 | - | 13,651 | 58,814 | 6,033 | - | - | 4,271 |
| DEPARTMENT OF THE AIR FORCE..... | 2,380,615 | 349,678 | 1,861,691 | - | 2,488 | 25,550 | 29,810 | 111,188 | - | 210 |
| DEFENSE AGENCIES..... | 106,518 | 46,197 | 47,916 | 6,200 | 1,545 | 283 | 2,317 | 2,060 | - | - |
| DEPARTMENT-WIDE FUNDS..... | 50,000 | 2,500 | 42,500 | - | 5,000 | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 117,715 | 11,953 | 10,357 | - | 46,059 | 2,120 | 17,879 | 74,406 | 4,029 | 912 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. NATIONAL INSTITUTES OF HEALTH..... | 38,440 7,780 | 8,026 700 | 6,995 1,949 | - | 16,557 4,449 | 100 | 6,722 570 | - | - | 140 12 |
| OFFICE OF CHILD DEVELOPMENT..... | 3,500 | 175 | - | - | 1,600 | - | 1,725 | - | - | - |
| OFFICE OF EDUCATION..... | 64,615 | 3,002 | 1,413 | - | 22,586 | 2,020 | 7,987 | 24,406 | 3,201 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 3,380 | 50 | - | - | 867 | - | 875 | - | 828 | 760 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. DEPARTMENT OF THE INTERIOR, TOTAL..... | 37,563 50,521 | 6,085 15,811 | 26,670 29,471 | 300 1,000 | 1,202 1,461 | - - | 2,175 2,600 | - - | 1,131 - | - 178 |
| BONNEVILLE POWER ADMINISTRATION..... | 2,185 | 1,253 | 693 | - | 61 | - | - | - | - | 178 |
| BUREAU OF LAND MANAGEMENT..... | 24 | 24 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | 19,993 | 8,993 | 11,000 | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 103 | 103 | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.. OFFICE OF COAL RESEARCH..... | 2,026 7,568 | 2,026 100 | - 3,668 | - | - 1,200 | - | - 2,600 | - | - | - |
| OFFICE OF SALINE WATER..... | 18,410 | 3,300 | 13,910 | 1,000 | 200 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 212 | 12 | 200 | - | - | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 3,845 | 718 | 1,491 | - | 103 | - | 395 | - | 1,138 | - |
| BUREAU OF PRISONS..... | 200 | 140 | 5 | - | - | - | 20 | - | 35 | - |
| FEDERAL BUREAU OF INVESTIGATION..... | 795 | 115 | 680 | - | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 2,850 | 463 | 806 | - | 103 | - | 375 | - | 1,103 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 11,980 | 3,534 | 1,083 | - | 2,707 | - | 3,140 | - | 1,515 | - |
| BUREAU OF LABOR STATISTICS..... | 1,152 | 1,152 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 10,828 | 2,382 | 1,083 | - | 2,707 | - | 3,140 | - | 1,516 | - |

CONTINUED ON NEXT PAGE

TABLE C-68. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1971 (ESTIMATED)
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | EXTRAMURAL | | | | | | | FOREIGN |
|--|-----------|--------------------|-------------------------------|---|---------------------------------|---|--|--|-------|---------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN. BY NON- PROFIT INSTI- TUTIONS | OTHER | |
| POSTAL SERVICE..... | 39,579 | 5,745 | 33,834 | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 15,104 | 1,190 | 245 | - | 5,187 | - | 5,683 | - | - | 2,799 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 15,104 | 1,190 | 245 | - | 5,187 | - | 5,683 | - | - | 2,799 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 325,854 | 38,126 | 277,233 | - | 1,128 | - | 1,514 | 3,270 | 3,883 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 56,000 | 25,978 | 26,080 | - | 200 | - | - | 3,742 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 4,848 | 1,115 | - | - | - | - | - | - | 3,733 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 9,871 | 600 | 8,462 | - | 581 | - | - | 228 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 3,600 | 8 | 3,592 | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 233,519 | 3,800 | 229,719 | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 9,700 | 1,200 | 8,000 | - | - | - | 500 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 8,316 | 5,425 | 1,380 | - | 347 | - | 1,014 | - | 150 | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 572 | 572 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 572 | 572 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 883,148 | 10,999 | 268,709 | 397,560 | 3,895 | 190,568 | 3,499 | 7,433 | 150 | 312 |
| CIVIL SERVICE COMMISSION..... | 171 | 171 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 54,685 | 18,108 | 27,419 | - | 2,771 | 1,274 | 2,245 | 203 | 75 | 2,590 |
| GENERAL SERVICES ADMINISTRATION..... | 168 | 8 | - | - | 10 | - | - | - | 150 | - |
| LIBRARY OF CONGRESS..... | 1,509 | 1,509 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 1,770,163 | 255,194 | 1,444,789 | 1,455 | 36,487 | 27,107 | 4,831 | 50 | - | 250 |
| NATIONAL SCIENCE FOUNDATION..... | 17,715 | 3,013 | - | - | 6,930 | - | 7,626 | - | 146 | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 76,450 | 2,293 | 1,530 | - | 7,645 | - | 64,982 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 990 | 990 | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 1,857 | 1,857 | - | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 729 | 659 | 70 | - | - | - | - | - | - | - |
| UNITED STATES INFORMATION AGENCY..... | 26 | 26 | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 900 | 274 | 286 | - | 250 | - | 90 | - | - | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-69. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA-MURAL (1) | UNITED STATES AND TERRITORIES | | | | | | | FOREIGN |
|--|------------|--------------------|-------------------------------|-----------------------------------|-------------------------|-----------------------------------|-------------------------------|--|--------|---------|
| | | | EXTRAMURAL | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN. BY NON-PROFIT INSTITUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 10,017,924 | 1,915,798 | 6,829,748 | 422,693 | 157,514 | 342,318 | 153,152 | 160,823 | 21,549 | 14,329 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 10,544 | 10,081 | 347 | - | 54 | - | 62 | - | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 9,403 | 8,940 | 347 | - | 54 | - | 62 | - | - | - |
| FOREST SERVICE..... | 926 | 926 | - | - | - | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 215 | 215 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 37,948 | 15,082 | 19,949 | - | 1,375 | - | 375 | - | 1,009 | 158 |
| BUREAU OF THE CENSUS..... | 1,631 | 1,631 | - | - | - | - | - | - | - | - |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 3,520 | 910 | 725 | - | 1,200 | - | 200 | - | 485 | - |
| MARITIME ADMINISTRATION..... | 11,555 | 200 | 11,355 | - | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 3,651 | 3,493 | - | - | - | - | - | - | - | 158 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. PATENT OFFICE..... | 17,486 | 8,743 | 7,869 | - | 175 | - | 175 | - | 524 | - |
| | 105 | 105 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 6,658,482 | 1,538,546 | 4,821,185 | 6,200 | 26,358 | 120,929 | 44,794 | 130,998 | 3,700 | 5,772 |
| DEPARTMENT OF THE ARMY..... | 1,791,001 | 533,196 | 1,194,795 | - | 4,635 | 25,505 | 12,834 | 16,280 | 3,700 | 56 |
| DEPARTMENT OF THE NAVY..... | 2,223,274 | 607,169 | 1,519,103 | - | 13,058 | 71,224 | 6,104 | 1,200 | - | 5,416 |
| DEPARTMENT OF THE AIR FORCE..... | 2,511,010 | 331,300 | 2,017,689 | - | 2,258 | 24,000 | 23,745 | 111,718 | - | 300 |
| DEFENSE AGENCIES..... | 123,197 | 64,381 | 47,098 | 6,200 | 1,407 | 200 | 2,111 | 1,800 | - | - |
| DEPARTMENT-WIDE FUNDS..... | 50,000 | 2,500 | 42,500 | - | 5,000 | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 145,667 | 12,911 | 11,204 | - | 58,030 | 3,894 | 28,048 | 24,406 | 6,322 | 852 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. NATIONAL INSTITUTES OF HEALTH..... | 41,000 | 8,069 | 8,599 | - | 14,609 | - | 9,583 | - | - | 140 |
| OFFICE OF CHILD DEVELOPMENT..... | 14,035 | 843 | 1,439 | - | 10,380 | 300 | 1,065 | - | - | 12 |
| OFFICE OF EDUCATION..... | 13,000 | 520 | - | - | 5,140 | - | 7,340 | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 75,163 | 3,429 | 1,166 | - | 27,326 | 3,594 | 9,320 | 24,406 | 5,922 | - |
| | 2,465 | 50 | - | - | 575 | - | 740 | - | 400 | 700 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | 36,260 | 5,439 | 27,153 | 300 | 1,818 | - | 1,213 | - | 337 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 59,923 | 20,159 | 36,628 | 1,000 | 1,011 | - | 1,000 | - | - | 125 |
| BONNEVILLE POWER ADMINISTRATION..... | 2,598 | 1,325 | 1,242 | - | 31 | - | - | - | - | - |
| BUREAU OF LAND MANAGEMENT..... | 24 | 24 | - | - | - | - | - | - | - | - |
| BUREAU OF MINES..... | 27,219 | 13,219 | 14,000 | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 115 | 115 | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE.. | 2,054 | 2,054 | - | - | - | - | - | - | - | - |
| OFFICE OF COAL RESEARCH..... | 8,241 | 100 | 6,491 | - | 650 | - | 1,000 | - | - | - |
| OFFICE OF SALINE WATER..... | 19,275 | 3,300 | 14,775 | 1,000 | 200 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 397 | 22 | 120 | - | 130 | - | - | - | - | 125 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 8,743 | 1,397 | 2,538 | - | 1,500 | - | 320 | - | 2,988 | - |
| BUREAU OF PRISONS..... | 293 | 220 | 10 | - | - | - | 20 | - | 43 | - |
| FEDERAL BUREAU OF INVESTIGATION..... | 450 | 115 | 335 | - | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 8,000 | 1,062 | 2,193 | - | 1,500 | - | 300 | - | 2,945 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 12,220 | 3,587 | 1,107 | - | 2,767 | - | 3,210 | - | 1,549 | - |
| BUREAU OF LABOR STATISTICS..... | 1,152 | 1,152 | - | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 11,068 | 2,435 | 1,107 | - | 2,767 | - | 3,210 | - | 1,549 | - |

CONTINUED ON NEXT PAGE

TABLE C-69. FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY AGENCY AND PERFORMER, FISCAL YEAR 1972 (ESTIMATED)
CONTINUED
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRA- MURAL (1) | EXTRAMURAL | | | | | | FOREIGN | |
|--|-----------|------------------------|-------------------------------|---|---------------------------------|---|--|--|---------|-------|
| | | | UNITED STATES AND TERRITORIES | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN. BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN. BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN. BY NON- PROFIT INSTI- TUTIONS | | OTHER |
| POSTAL SERVICE..... | 70,407 | 12,050 | 57,857 | - | - | - | - | - | - | 500 |
| DEPARTMENT OF STATE, TOTAL..... | 15,939 | 1,025 | 330 | - | 6,637 | - | 5,410 | - | - | 2,537 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 15,939 | 1,025 | 330 | - | 6,637 | - | 5,410 | - | - | 2,537 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 299,244 | 29,139 | 261,110 | 587 | - | - | 3,640 | 400 | 4,368 | - |
| FEDERAL AVIATION ADMINISTRATION..... | 21,176 | 15,650 | 5,526 | - | - | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 5,673 | 1,305 | - | - | - | - | - | - | 4,368 | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 7,760 | 874 | 5,899 | 587 | - | - | - | 400 | - | - |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN.. | 4,500 | 10 | 4,490 | - | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 235,000 | 3,800 | 231,200 | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 11,195 | 1,500 | 8,795 | - | - | - | 900 | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 13,940 | 6,000 | 5,200 | - | - | - | 2,740 | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 518 | 518 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 518 | 518 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 840,003 | 9,587 | 221,355 | 413,491 | 2,986 | 186,223 | 1,809 | 3,922 | 30 | 600 |
| CIVIL SERVICE COMMISSION..... | 183 | 183 | - | - | - | - | - | - | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 65,656 | 15,927 | 38,802 | - | 3,187 | 1,465 | 2,582 | 72 | 86 | 3,535 |
| GENERAL SERVICES ADMINISTRATION..... | 182 | 22 | - | - | - | - | - | - | 160 | - |
| LIBRARY OF CONGRESS..... | 2,741 | 2,741 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 1,626,538 | 225,412 | 1,328,617 | 1,115 | 38,538 | 29,807 | 2,774 | 25 | - | 250 |
| NATIONAL SCIENCE FOUNDATION..... | 24,250 | 6,000 | - | - | 7,250 | - | 9,000 | 1,000 | 1,000 | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | 57,400 | 1,722 | 1,148 | - | 5,740 | - | 48,790 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 1,080 | 1,080 | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 1,970 | 1,970 | - | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY... | 1,076 | 936 | 105 | - | - | - | 35 | - | - | - |
| UNITED STATES INFORMATION AGENCY..... | 50 | 10 | 20 | - | 20 | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 900 | 274 | 293 | - | 243 | - | 90 | - | - | - |

(1) INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS
BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION).

TABLE C-70. FEDERAL FUNDS FOR R&D PLANT, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(MILLIONS OF DOLLARS)

| AGENCY AND SUBDIVISION | OBLIGATIONS | | EXPENDITURES | | |
|--|--------------|-----------|--------------|--------------|-----------|
| | ACTUAL, 1970 | ESTIMATES | | ACTUAL, 1970 | ESTIMATES |
| | | 1971 | 1972 | | |
| TOTAL, ALL AGENCIES..... | 524.4 | 659.1 | 588.3 | 578.9 | 661.1 |
| DEPARTMENTS | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 5.3 | 8.9 | 3.7 | 13.6 | 9.9 |
| AGRICULTURAL RESEARCH SERVICE..... | 3.3 | 7.7 | 3.7 | 11.2 | 6.8 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 1.0 | - | - | 1.4 | 1.4 |
| FOREST SERVICE..... | .9 | 1.2 | - | 1.0 | 1.7 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 3.9 | 8.5 | 3.6 | 5.1 | 6.7 |
| NATIONAL BUREAU OF STANDARDS..... | 1.2 | 3.8 | .6 | 2.1 | 2.8 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 2.7 | 4.7 | 3.0 | 2.9 | 3.8 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 340.6 | 161.8 | 160.4 | 140.8 | 163.3 |
| DEPARTMENT OF THE ARMY..... | 27.2 | 38.1 | 37.3 | 18.2 | 46.5 |
| DEPARTMENT OF THE NAVY..... | 18.2 | 36.5 | 37.7 | 21.6 | 30.0 |
| DEPARTMENT OF THE AIR FORCE..... | 59.2 | 50.6 | 56.4 | 61.5 | 50.2 |
| DEFENSE AGENCIES..... | 36.0 | 36.5 | 29.1 | 39.6 | 36.6 |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 31.2 | 24.4 | 23.1 | 43.3 | 53.7 |
| FOOD AND DRUG ADMINISTRATION..... | - | 2.6 | 6.1 | - | 1.4 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | - | .2 | - | .3 | .3 |
| NATIONAL INSTITUTES OF HEALTH..... | 19.9 | 21.6 | 17.0 | 41.1 | 42.3 |
| OFFICE OF EDUCATION..... | 11.3 | - | - | 1.9 | 9.6 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 10.6 | 14.0 | 12.1 | 8.3 | 12.8 |
| BONNEVILLE POWER ADMINISTRATION..... | .3 | 1.0 | 1.1 | .1 | 1.3 |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | .5 | 1.0 | .3 | .5 | .9 |
| OFFICE OF COAL RESEARCH..... | 7.8 | 6.8 | 8.7 | 6.1 | 9.0 |
| OFFICE OF SALINE WATER..... | 2.0 | 5.3 | 2.3 | 1.6 | 1.7 |
| POSTAL SERVICE..... | * | 1.1 | .4 | * | 1.1 |
| DEPARTMENT OF STATE, TOTAL..... | .1 | .3 | .2 | .1 | .3 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | .1 | .3 | .2 | .1 | .3 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 5.5 | 19.5 | 42.6 | 3.7 | 12.6 |
| FEDERAL AVIATION ADMINISTRATION..... | .2 | .3 | 2.5 | .2 | .3 |
| FEDERAL HIGHWAY ADMINISTRATION..... | .1 | .4 | .4 | .1 | .4 |
| FEDERAL RAILROAD ADMINISTRATION..... | 4.8 | 13.5 | 24.4 | 3.0 | 6.7 |
| UNITED STATES COAST GUARD..... | .3 | .2 | 10.3 | .3 | .1 |
| URBAN MASS TRANSPORTATION ADMINISTRATION..... | - | 5.1 | 5.0 | - | 5.1 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | * | * | * | * | * |
| BUREAU OF ENGRAVING AND PRINTING..... | * | * | * | * | * |
| OTHER AGENCIES | | | | | |
| ATOMIC ENERGY COMMISSION..... | 65.9 | 353.4 | 243.0 | 270.0 | 312.3 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 2.0 | 4.9 | 22.3 | 2.1 | 2.5 |
| FEDERAL COMMUNICATIONS COMMISSION..... | * | * | * | * | * |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 33.4 | 25.0 | 56.3 | 56.6 | 50.6 |
| NATIONAL SCIENCE FOUNDATION..... | 23.3 | 21.6 | 18.9 | 31.2 | 29.3 |
| SMITHSONIAN INSTITUTION..... | .1 | .5 | - | .2 | .2 |
| TENNESSEE VALLEY AUTHORITY..... | * | .1 | .2 | * | .1 |
| VETERANS ADMINISTRATION..... | 2.6 | 15.0 | 1.3 | 3.7 | 5.8 |
| | | | | | 271.6 |
| | | | | | 6.9 |
| | | | | | * |
| | | | | | 43.0 |
| | | | | | 27.6 |
| | | | | | .4 |
| | | | | | .2 |
| | | | | | 9.8 |

TABLE C-71. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND PERFORMER OF THE RESEARCH AND DEVELOPMENT THE PLANT SUPPORTS,
FISCAL YEAR 1970
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | FEDERAL INTRA- MURAL | EXTRAMURAL | | | | | | | FOREIGN |
|---|---------|----------------------------|---------------------|--|---------------------------------|--|--|--|---|---------|
| | | | DOMESTIC | | | | | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NON- PROFIT INSTI- TUTIONS | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | | | |
| TOTAL, ALL AGENCIES..... | 524,448 | 166,000 | 41,425 | 60,866 | 56,114 | 169,016 | 4,740 | 24,109 | 2,085 | 99 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 5,250 | 4,250 | - | - | 995 | - | 5 | - | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 3,320 | 3,320 | - | - | - | - | - | - | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 1,000 | - | - | - | 995 | - | 5 | - | - | - |
| FOREST SERVICE..... | 930 | 930 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 3,883 | 2,586 | 100 | - | - | - | - | - | 1,197 | - |
| NATIONAL BUREAU OF STANDARDS..... | 1,204 | 1,204 | - | - | - | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 2,679 | 1,382 | 100 | - | - | - | - | - | 1,197 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 140,581 | 117,839 | 12,111 | 75 | 10,256 | 240 | 60 | - | - | - |
| DEPARTMENT OF THE ARMY..... | 27,203 | 27,203 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE NAVY..... | 18,212 | 18,212 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 59,160 | 59,160 | - | - | - | - | - | - | - | - |
| DEFENSE AGENCIES..... | 36,006 | 13,264 | 12,111 | 75 | 10,256 | 240 | 60 | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 31,210 | 248 | - | - | 19,671 | - | - | 11,291 | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 19,919 | 248 | - | - | 19,671 | - | - | 11,291 | - | - |
| OFFICE OF EDUCATION..... | 11,291 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 10,610 | 796 | 5,532 | - | 500 | - | 3,822 | - | 50 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 305 | 305 | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 451 | 401 | - | - | - | - | - | - | 50 | - |
| OFFICE OF COAL RESEARCH..... | 7,822 | - | 3,500 | - | 500 | - | 3,822 | - | - | - |
| OFFICE OF SALINE WATER..... | 2,032 | - | 2,032 | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 22 | 22 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 58 | - | - | - | - | - | - | - | - | 58 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 58 | - | - | - | - | - | - | - | - | 58 |
| DEPARTMENT OF TRANSPORTATION, TOTAL.... | 5,470 | 5,470 | - | - | - | - | - | - | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 240 | 240 | - | - | - | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 102 | 102 | - | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 4,846 | 4,846 | - | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 282 | 282 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 15 | 15 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 15 | 15 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 265,900 | 602 | 22,792 | 60,791 | 5,286 | 164,368 | 145 | 11,875 | - | 41 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 1,957 | 1,067 | 890 | - | - | - | - | - | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 10 | 10 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 33,416 | 30,457 | - | - | - | 2,959 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 23,335 | - | - | - | 19,406 | 1,449 | 708 | 934 | 838 | - |
| SMITHSONIAN INSTITUTION..... | 57 | 57 | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 40 | 40 | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 2,634 | 2,634 | - | - | - | - | - | - | - | - |

TABLE C-72. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND PERFORMER OF THE RESEARCH AND DEVELOPMENT THE PLANT SUPPORTS, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | FEDERAL INTRA- MURAL | EXTRAMURAL | | | | | | FOREIGN | |
|--|---------|----------------------------|---------------------|--|---------------------------------|--|--|---|---------|-------|
| | | | DOMESTIC | | | | | | | |
| | | | INDUSTRIAL FIRMS | FERDCS ADMIN BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FERDCS ADMIN BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FERDCS ADMIN BY NON- PROFIT INSTI- TUTIONS | | OTHER |
| TOTAL, ALL AGENCIES..... | 659,076 | 236,244 | 71,531 | 123,123 | 46,572 | 175,681 | 3,381 | 1,758 | 125 | 661 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 8,928 | 8,928 | - | - | - | - | - | - | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 7,743 | 7,743 | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 1,185 | 1,185 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 8,507 | 8,507 | - | - | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 3,771 | 3,771 | - | - | - | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 4,736 | 4,736 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 161,814 | 140,094 | 10,393 | - | 11,312 | - | - | 10 | - | 5 |
| DEPARTMENT OF THE ARMY..... | 38,148 | 38,148 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE NAVY..... | 36,547 | 36,547 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 50,638 | 50,638 | - | - | - | - | - | - | - | - |
| DEFENSE AGENCIES..... | 36,481 | 14,761 | 10,393 | - | 11,312 | - | - | 10 | - | 5 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 24,369 | 9,746 | - | - | 14,623 | - | - | - | - | - |
| FOOD AND DRUG ADMINISTRATION..... | 2,590 | 2,590 | - | - | - | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | 189 | 189 | - | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 21,590 | 6,967 | - | - | 14,623 | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 14,016 | 1,848 | 8,618 | - | 877 | - | 2,573 | - | 100 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 985 | 985 | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 963 | 863 | - | - | - | - | - | - | 100 | - |
| OFFICE OF COAL RESEARCH..... | 6,000 | - | 3,350 | - | 877 | - | 2,573 | - | - | - |
| OFFICE OF SALINE WATER..... | 5,268 | - | 5,268 | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 1,143 | 1,143 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 323 | - | - | - | - | - | - | - | - | 323 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 323 | - | - | - | - | - | - | - | - | 323 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 19,456 | 19,456 | - | - | - | - | - | - | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 300 | 300 | - | - | - | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 400 | 400 | - | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 13,490 | 13,490 | - | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 191 | 191 | - | - | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 5,075 | 5,075 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 15 | 15 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 15 | 15 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 353,437 | 662 | 51,835 | 123,123 | 4,447 | 171,191 | 808 | 1,371 | - | 20 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 4,869 | 4,184 | 685 | - | - | - | - | - | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 10 | 10 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 24,950 | 24,950 | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 21,603 | 1,085 | - | - | 15,313 | 4,490 | - | 377 | 25 | 313 |
| SMITHSONIAN INSTITUTION..... | 529 | 529 | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 113 | 113 | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 14,994 | 14,994 | - | - | - | - | - | - | - | - |

TABLE C-73. FEDERAL OBLIGATIONS FOR R&D PLANT, BY AGENCY AND PERFORMER OF THE RESEARCH AND DEVELOPMENT THE PLANT SUPPORTS, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | FEDERAL INTRA- MURAL | EXTRAMURAL | | | | | | | FOREIGN |
|--|---------|----------------------------|---------------------|--|---------------------------------|--|--|---|-------|---------|
| | | | DOMESTIC | | | | | | | |
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NON- PROFIT INSTI- TUTIONS | OTHER | |
| TOTAL, ALL AGENCIES..... | 588,277 | 289,227 | 52,227 | 74,279 | 32,443 | 133,936 | 3,570 | 1,820 | 125 | 650 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 3,572 | 3,672 | - | - | - | - | - | - | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 3,672 | 3,672 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 3,606 | 3,606 | - | - | - | - | - | - | - | - |
| NATIONAL BUREAU OF STANDARDS..... | 646 | 646 | - | - | - | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 2,960 | 2,960 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 160,381 | 143,522 | 11,104 | - | 5,615 | 125 | - | 10 | - | 5 |
| DEPARTMENT OF THE ARMY..... | 37,259 | 37,259 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE NAVY..... | 37,710 | 37,710 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE AIR FORCE..... | 56,357 | 56,357 | - | - | - | - | - | - | - | - |
| DEFENSE AGENCIES..... | 29,055 | 12,196 | 11,104 | - | 5,615 | 125 | - | 10 | - | 5 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 23,103 | 13,042 | - | - | 10,061 | - | - | - | - | - |
| FOOD AND DRUG ADMINISTRATION..... | 6,061 | 6,061 | - | - | - | - | - | - | - | - |
| NATIONAL INSTITUTES OF HEALTH..... | 17,042 | 6,981 | - | - | 10,061 | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 12,279 | 1,204 | 7,050 | - | 925 | - | 3,000 | - | 100 | - |
| BONNEVILLE POWER ADMINISTRATION..... | 1,054 | 1,054 | - | - | - | - | - | - | - | - |
| BUREAU OF SPORT FISHERIES & WILDLIFE... | 250 | 150 | - | - | - | - | - | - | 100 | - |
| OFFICE OF COAL RESEARCH..... | 8,700 | - | 4,775 | - | 925 | - | 3,000 | - | - | - |
| OFFICE OF SALINE WATER..... | 2,275 | - | 2,275 | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 397 | 397 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 221 | - | - | - | - | - | - | - | - | 221 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 221 | - | - | - | - | - | - | - | - | 221 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 42,623 | 42,623 | - | - | - | - | - | - | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 2,503 | 2,503 | - | - | - | - | - | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 400 | 400 | - | - | - | - | - | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | 24,440 | 24,440 | - | - | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 10,280 | 10,280 | - | - | - | - | - | - | - | - |
| URBAN MASS TRANSPORTATION ADMIN..... | 5,000 | 5,000 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | 10 | 10 | - | - | - | - | - | - | - | - |
| BUREAU OF ENGRAVING AND PRINTING..... | 10 | 10 | - | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 242,960 | 435 | 33,564 | 74,279 | 4,288 | 128,619 | 570 | 1,185 | - | 20 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 22,309 | 21,800 | 509 | - | - | - | - | - | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 15 | 15 | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 56,300 | 56,300 | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION..... | 19,900 | 1,100 | - | - | 11,554 | 5,192 | - | 625 | 25 | 404 |
| TENNESSEE VALLEY AUTHORITY..... | 195 | 195 | - | - | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 1,306 | 1,306 | - | - | - | - | - | - | - | - |

TABLE C-74. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| REGION AND COUNTRY | TOTAL | DEPARTMENT OF AGRICULTURE | DEPARTMENT OF DEFENSE | DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE | | ATOMIC ENERGY COMMISSION | OTHER |
|----------------------------|--------|---------------------------|-----------------------|--|-------------------------------|--------------------------|-------|
| | | | | TOTAL | NATIONAL INSTITUTES OF HEALTH | | |
| TOTAL, ALL COUNTRIES..... | 40,228 | 5,494 | 12,197 | 15,639 | 9,777 | 681 | 217 |
| EUROPE, TOTAL..... | 13,996 | 1,993 | 4,339 | 5,542 | 2,693 | 212 | 1,910 |
| AUSTRIA..... | 49 | - | 25 | - | - | 19 | 5 |
| BELGIUM..... | 177 | - | 113 | 64 | 64 | - | - |
| DENMARK..... | 131 | - | - | 123 | 123 | - | - |
| FINLAND..... | 111 | - | - | 74 | 66 | 37 | - |
| FRANCE..... | 1,669 | - | 1,445 | 87 | 67 | - | 137 |
| GERMANY..... | 80 | - | - | - | - | 80 | - |
| ICELAND..... | 25 | - | 5 | 20 | 20 | - | - |
| IRELAND..... | 647 | 103 | 163 | 352 | 273 | 25 | 4 |
| ITALY..... | 168 | - | 67 | 101 | 101 | - | - |
| NETHERLANDS..... | 1,512 | - | 1,378 | 134 | 47 | - | - |
| NORWAY..... | 1,524 | 718 | - | 806 | 654 | - | - |
| POLAND..... | 73 | - | 15 | 8 | 8 | 25 | 25 |
| SPAIN..... | 844 | - | 91 | 566 | 531 | - | 187 |
| SWEDEN..... | 312 | - | - | 265 | 51 | - | 47 |
| SWITZERLAND..... | 2,001 | 50 | 829 | 349 | 200 | 10 | 754 |
| UNITED KINGDOM, TOTAL..... | 1,834 | - | 774 | 328 | 179 | 10 | 722 |
| ENGLAND..... | 61 | - | 26 | 5 | 5 | - | 30 |
| SCOTLAND..... | 106 | 59 | 29 | 16 | 16 | - | 2 |
| OTHER UNITED KINGDOM..... | 924 | 7 | 200 | - | - | 16 | 701 |
| WEST GERMANY..... | 3,749 | 1,106 | - | 2,593 | 488 | - | 50 |
| YUGOSLAVIA..... | - | - | - | - | - | - | - |
| ASIA, TOTAL..... | 8,375 | 1,705 | 1,512 | 3,044 | 1,994 | - | 2,114 |
| INDIA..... | 3,609 | 1,124 | 1,139 | 1,749 | 464 | - | 297 |
| INDONESIA..... | 88 | - | - | - | - | - | 88 |
| JAPAN..... | 333 | - | 75 | 257 | 257 | - | 1 |
| MALAYSIA..... | 46 | - | 46 | - | - | - | - |
| PAKISTAN..... | 2,150 | 581 | - | 1,569 | 1,131 | - | 9 |
| PHILIPPINES..... | 625 | - | 24 | 49 | 49 | - | 552 |
| TAIWAN..... | 49 | - | 31 | 18 | 18 | - | - |
| THAILAND..... | 195 | - | 131 | 64 | 64 | - | - |
| SOUTH VIETNAM..... | 851 | - | 56 | - | - | - | 795 |
| OTHER ASIA..... | 429 | - | 10 | 47 | 11 | - | 372 |
| NEAR EAST, TOTAL..... | 7,141 | 1,742 | 507 | 3,861 | 2,352 | 32 | 999 |
| GREECE..... | 39 | - | 3 | 36 | 36 | - | - |
| ISRAEL..... | 6,560 | 1,719 | 354 | 3,456 | 2,067 | 32 | 999 |
| LEBANON..... | 231 | - | 150 | 81 | 81 | - | - |
| UNITED ARAB REPUBLIC..... | 311 | 23 | - | 288 | 168 | - | - |
| AFRICA, TOTAL..... | 962 | 54 | 10 | 390 | 305 | - | 508 |
| KENYA..... | 64 | - | 5 | - | - | - | 58 |
| NIGERIA..... | 488 | - | - | 38 | 38 | - | 450 |
| UGANDA..... | 161 | - | - | 161 | 161 | - | - |
| UNION OF SOUTH AFRICA..... | 106 | - | - | 106 | 106 | - | - |
| OTHER AFRICA..... | 143 | 54 | 4 | 85 | - | - | - |
| LATIN AMERICA, TOTAL..... | 3,983 | - | 701 | 948 | 948 | 166 | 2,168 |
| ARGENTINA..... | 148 | - | 28 | 104 | 104 | 16 | - |
| BOLIVIA..... | 57 | - | 57 | - | - | 21 | - |
| BRAZIL..... | 167 | - | 115 | 31 | 31 | - | - |
| CHILE..... | 1,584 | - | 18 | 26 | 26 | - | 1,540 |
| COLOMBIA..... | 426 | - | 16 | 135 | 135 | - | 275 |
| COSTA RICA..... | 174 | - | - | 12 | 12 | 129 | 33 |
| EL SALVADOR..... | 7 | - | - | 7 | 7 | - | - |
| MEXICO..... | 53 | - | - | 53 | 53 | - | - |
| PANAMA..... | 617 | - | 4 | 500 | 500 | - | 73 |
| PERU..... | 89 | - | 13 | - | - | - | 76 |
| URUGUAY..... | 39 | - | 3 | 36 | 36 | - | - |
| VENEZUELA..... | 17 | - | 407 | 17 | 17 | - | - |
| OTHER LATIN AMERICA..... | 605 | - | - | 27 | 27 | - | 171 |

| | | | | | | | |
|-----------------------------|-------|-------|-------|-------|-------|-----|-------|
| UNITED KINGDOM, TOTAL | 2,001 | 50 | 829 | 349 | 200 | 10 | 754 |
| ENGLAND | 1,834 | - | 774 | 328 | 179 | 10 | 722 |
| SCOTLAND | 61 | - | 26 | 5 | 5 | - | 30 |
| OTHER UNITED KINGDOM | 106 | 59 | 29 | 16 | 16 | - | 2 |
| WEST GERMANY | 924 | 7 | 200 | - | - | 16 | 701 |
| YUGOSLAVIA | 3,749 | 1,106 | - | 2,593 | 488 | - | 50 |
| ASIA, TOTAL | 8,375 | 1,705 | 1,512 | 3,044 | 1,954 | - | 2,114 |
| INDIA | 3,609 | 1,124 | 1,139 | 1,049 | 464 | - | 297 |
| INDONESIA | 88 | - | - | - | - | - | 88 |
| JAPAN | 333 | - | 75 | 257 | 257 | - | 1 |
| MALAYSIA | 46 | - | 46 | - | - | - | - |
| PAKISTAN | 2,150 | 581 | - | 1,560 | 1,131 | - | 9 |
| PHILIPPINES | 625 | - | 24 | 49 | 49 | - | 552 |
| TAIWAN | 49 | - | 31 | 18 | 18 | - | - |
| THAILAND | 195 | - | 131 | 64 | 64 | - | - |
| SOUTH VIETNAM | 851 | - | 56 | - | - | - | 795 |
| OTHER ASIA | 429 | - | 10 | 47 | 11 | - | 372 |
| NEAR EAST, TOTAL | 7,141 | 1,742 | 507 | 3,861 | 2,352 | 32 | 999 |
| GREECE | 39 | - | 3 | 36 | 36 | - | - |
| ISRAEL | 6,560 | 1,719 | 354 | 3,456 | 2,067 | 32 | 999 |
| LEBANON | 231 | - | 150 | 81 | 81 | - | - |
| UNITED ARAB REPUBLIC | 311 | 23 | - | 288 | 168 | - | - |
| AFRICA, TOTAL | 962 | 54 | 10 | 390 | 305 | - | 508 |
| KENYA | 64 | - | 6 | - | - | - | 58 |
| NIGERIA | 488 | - | - | 38 | 38 | - | 450 |
| UGANDA | 161 | - | - | 161 | 161 | - | - |
| UNION OF SOUTH AFRICA | 106 | - | - | 106 | 106 | - | - |
| OTHER AFRICA | 143 | 54 | 4 | 85 | - | - | - |
| LATIN AMERICA, TOTAL | 3,983 | - | 701 | 948 | 948 | 166 | 2,168 |
| ARGENTINA | 148 | - | 28 | 104 | 104 | 16 | - |
| BOLIVIA | 57 | - | 57 | - | - | - | - |
| BRAZIL | 167 | - | 115 | 31 | 31 | 21 | - |
| CHILE | 1,584 | - | 18 | 26 | 26 | - | 1,540 |
| COLOMBIA | 426 | - | 16 | 135 | 135 | - | 275 |
| COSTA RICA | 174 | - | - | 12 | 12 | 129 | 33 |
| EL SALVADOR | 7 | - | - | 7 | 7 | - | - |
| MEXICO | 53 | - | - | 53 | 53 | - | - |
| PANAMA | 617 | - | 44 | 500 | 500 | - | 73 |
| PERU | 89 | - | 13 | - | - | - | 76 |
| URUGUAY | 39 | - | 3 | 36 | 36 | - | - |
| VENEZUELA | 17 | - | - | 17 | 17 | - | - |
| OTHER LATIN AMERICA | 605 | - | 407 | 27 | 27 | - | 171 |
| AUSTRALIA | 445 | - | 21 | 138 | 138 | 227 | 59 |
| CANADA | 4,154 | - | 3,099 | 568 | 378 | 44 | 443 |
| NEW ZEALAND | 41 | - | 8 | 17 | 17 | - | 16 |
| INTERNATIONAL ORGANIZATIONS | 1,131 | - | - | 1,131 | 952 | - | - |

TABLE C-75. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY,
FISCAL YEAR 1971 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| REGION AND COUNTRY | TOTAL | DEPARTMENT OF AGRICULTURE | DEPARTMENT OF DEFENSE | DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE | | ATOMIC ENERGY COMMISSION | OTHER |
|----------------------------|--------|---------------------------------|-----------------------------|---|-------------------------------------|--------------------------------|--------|
| | | | | TOTAL | NATIONAL INSTITUTES OF HEALTH | | |
| TOTAL, ALL COUNTRIES..... | 67,688 | 6,601 | 8,076 | 37,708 | 15,540 | 943 | 14,360 |
| EUROPE, TOTAL..... | 29,116 | 2,966 | 3,864 | 16,528 | 6,000 | 517 | 5,241 |
| AUSTRIA..... | 76 | - | 46 | - | - | 25 | 5 |
| BELGIUM..... | 197 | - | 136 | 60 | 60 | - | 1 |
| DENMARK..... | 125 | - | 10 | 115 | 115 | - | - |
| FINLAND..... | 98 | 1 | - | 60 | 60 | 37 | - |
| FRANCE..... | 735 | 4 | 557 | 78 | 65 | - | 96 |
| ICELAND..... | 79 | - | - | - | - | 79 | - |
| IRELAND..... | 45 | - | 25 | 20 | 20 | - | - |
| ITALY..... | 848 | 105 | 128 | 299 | 270 | 312 | 4 |
| NETHERLANDS..... | 631 | 1 | 530 | 100 | 100 | - | - |
| NORWAY..... | 881 | - | 798 | 70 | 45 | 13 | - |
| POLAND..... | 5,678 | 481 | - | 5,197 | 2,356 | - | - |
| SPAIN..... | 88 | 1 | 30 | 10 | 10 | 25 | 22 |
| SWEDEN..... | 773 | 1 | 25 | 560 | 525 | - | 187 |
| SWITZERLAND..... | 136 | - | - | 85 | 50 | - | 51 |
| UNITED KINGDOM, TOTAL..... | 2,934 | 109 | 1,508 | 445 | 195 | 10 | 862 |
| ENGLAND..... | 2,719 | - | 1,465 | 425 | 175 | 10 | 819 |
| SCOTLAND..... | 68 | - | 23 | 5 | 5 | - | 40 |
| OTHER UNITED KINGDOM..... | 147 | 109 | 20 | 15 | 15 | - | 3 |
| WEST GERMANY..... | 801 | 3 | 71 | - | - | 16 | 711 |
| YUGOSLAVIA..... | 14,991 | 2,260 | - | 9,429 | 2,127 | - | 3,302 |
| ASIA, TOTAL..... | 17,308 | 2,600 | 1,161 | 9,896 | 3,427 | - | 3,651 |
| INDIA..... | 8,770 | 1,446 | 588 | 6,087 | 2,254 | - | 649 |
| INDONESIA..... | 334 | - | - | - | - | - | 334 |
| JAPAN..... | 268 | 3 | 50 | 175 | 175 | - | 40 |
| MALAYSIA..... | 45 | - | 45 | - | - | - | - |
| PAKISTAN..... | 4,548 | 1,151 | 250 | 3,129 | 858 | - | 18 |
| PHILIPPINES..... | 991 | - | 2 | 50 | 50 | - | 939 |
| TAIWAN..... | 289 | - | 19 | 20 | 20 | - | 250 |
| THAILAND..... | 107 | - | 47 | 60 | 60 | - | - |
| SOUTH VIETNAM..... | 1,520 | - | 100 | - | - | - | - |
| OTHER ASIA..... | 436 | - | 60 | 375 | 10 | - | 1,420 |
| NEAR EAST, TOTAL..... | 6,735 | 784 | 193 | 5,016 | 2,636 | 32 | 710 |
| GREECE..... | 38 | - | 3 | 35 | 35 | - | - |
| ISRAEL..... | 5,020 | 716 | 190 | 3,372 | 1,850 | 32 | 710 |
| LEBANON..... | 75 | - | - | 75 | 75 | - | - |
| TURKEY..... | 1 | 1 | - | - | - | - | - |
| UNITED ARAB REPUBLIC..... | 1,601 | 67 | - | 1,534 | 676 | - | - |
| AFRICA, TOTAL..... | 5,180 | 251 | 8 | 3,533 | 1,077 | - | 1,388 |
| KENYA..... | 69 | - | 3 | - | - | - | 65 |

| | | | | | | | | | | | |
|----------------------------------|--------|-------|-------|-----|-------|-------|-----|-------|-----|-------|-------|
| FINLAND..... | 98 | 1 | - | - | 60 | 60 | 37 | 60 | 37 | - | 96 |
| FRANCE..... | 735 | 4 | 557 | - | 78 | 65 | - | - | - | - | - |
| ICELAND..... | 79 | - | - | - | - | - | 79 | - | - | - | - |
| Ireland..... | 45 | - | 25 | - | 20 | 20 | - | - | - | - | - |
| ITALY..... | 848 | 105 | 128 | 299 | 299 | 270 | 312 | 270 | 312 | 4 | 4 |
| NETHERLANDS..... | 631 | 1 | 530 | 100 | 100 | 100 | - | 100 | - | - | - |
| NORWAY..... | 881 | - | 798 | 70 | 70 | 45 | 13 | 45 | 13 | - | - |
| POLAND..... | 5,678 | 481 | - | - | 5,197 | 2,356 | - | 2,356 | - | - | - |
| SPAIN..... | 83 | 1 | 30 | - | 10 | 10 | 25 | 10 | 25 | 22 | 22 |
| SWEDEN..... | 773 | 1 | 25 | - | 560 | 525 | - | 525 | - | 187 | 187 |
| SWITZERLAND..... | 136 | - | - | - | 85 | 50 | - | 50 | - | 51 | 51 |
| UNITED KINGDOM, TOTAL..... | 2,934 | 109 | 1,508 | - | 445 | 195 | 10 | 195 | 10 | 862 | 862 |
| ENGLAND..... | 2,719 | - | 1,465 | - | 425 | 175 | 10 | 175 | 10 | 819 | 819 |
| SCOTLAND..... | 68 | - | 23 | - | 5 | 5 | - | 5 | - | 40 | 40 |
| OTHER UNITED KINGDOM..... | 147 | 109 | 20 | - | 15 | 15 | - | 15 | - | 3 | 3 |
| WEST GERMANY..... | 801 | 3 | 71 | - | - | - | - | - | - | 711 | 711 |
| YUGOSLAVIA..... | 14,991 | 2,260 | - | - | 9,429 | 2,129 | 16 | - | 16 | - | 3,302 |
| ASIA, TOTAL..... | 17,308 | 2,600 | 1,161 | - | 9,896 | 3,427 | - | 3,427 | - | - | 3,651 |
| INDIA..... | 8,770 | 1,446 | 588 | - | 6,087 | 2,254 | - | 2,254 | - | - | 649 |
| INDONESIA..... | 334 | - | - | - | - | - | - | - | - | - | 334 |
| JAPAN..... | 268 | 3 | 50 | - | 175 | 175 | - | - | - | - | 40 |
| Malaysia..... | 45 | - | 45 | - | - | - | - | - | - | - | - |
| PAKISTAN..... | 4,548 | 1,151 | 250 | - | 3,129 | 358 | - | 358 | - | 18 | 18 |
| PHILIPPINES..... | 991 | - | 2 | - | 50 | 50 | - | 50 | - | 939 | 939 |
| TAIWAN..... | 289 | - | 19 | - | 20 | 20 | - | 20 | - | 250 | 250 |
| THAILAND..... | 107 | - | 47 | - | 60 | 60 | - | 60 | - | - | - |
| SOUTH VIETNAM..... | 1,520 | - | 100 | - | - | - | - | - | - | 1,420 | 1,420 |
| OTHER ASIA..... | 436 | - | 60 | - | 375 | 10 | - | 10 | - | 1 | 1 |
| NEAR EAST, TOTAL..... | 6,735 | 784 | 193 | - | 5,016 | 2,636 | 32 | 2,636 | 32 | - | 710 |
| GREECE..... | 38 | - | 3 | - | 35 | 35 | - | 35 | - | - | - |
| ISRAEL..... | 5,020 | 716 | 190 | - | 3,372 | 1,850 | 32 | 1,850 | 32 | - | 710 |
| LEBANON..... | 75 | - | - | - | 75 | 75 | - | - | - | - | - |
| TURKEY..... | 1 | 1 | - | - | - | - | - | - | - | - | - |
| UNITED ARAB REPUBLIC..... | 1,501 | 67 | - | - | 1,534 | 676 | - | 676 | - | - | - |
| AFRICA, TOTAL..... | 5,180 | 251 | 8 | - | 3,533 | 1,077 | - | 1,077 | - | - | 1,388 |
| KENYA..... | 68 | - | 3 | - | - | - | - | - | - | 65 | 65 |
| NIGERIA..... | 1,180 | - | - | - | 35 | 35 | - | 35 | - | 1,145 | 1,145 |
| UGANDA..... | 160 | - | - | - | 160 | 160 | - | 160 | - | - | - |
| UNION OF SOUTH AFRICA..... | 113 | - | - | - | 100 | 100 | - | 100 | - | 13 | 13 |
| OTHER AFRICA..... | 3,659 | 251 | 5 | - | 3,238 | 782 | - | 782 | - | 165 | 165 |
| LATIN AMERICA, TOTAL..... | 4,464 | - | 665 | - | 951 | 945 | 191 | 945 | 191 | - | 2,657 |
| ARGENTINA..... | 100 | - | - | - | 100 | 100 | - | 100 | - | - | - |
| BRAZIL..... | 165 | - | 103 | - | 30 | 30 | 32 | 30 | 32 | - | - |
| CHILE..... | 1,668 | - | 20 | - | 25 | 25 | 6 | 25 | 6 | 1,617 | 1,617 |
| COLOMBIA..... | 905 | - | 14 | - | 141 | 135 | - | 135 | - | 750 | 750 |
| COSTA RICA..... | 185 | - | - | - | 15 | 15 | 135 | 15 | 135 | 35 | 35 |
| EL SALVADOR..... | 5 | - | - | - | 5 | 5 | - | 5 | - | - | - |
| MEXICO..... | 55 | - | - | - | 55 | 55 | - | 55 | - | - | - |
| PANAMA..... | 647 | - | 71 | - | 500 | 500 | - | 500 | - | 76 | 76 |
| PERU..... | 115 | - | 57 | - | - | - | 10 | - | 10 | 40 | 40 |
| URUGUAY..... | 35 | - | - | - | 35 | 35 | - | 35 | - | - | - |
| VENEZUELA..... | 20 | - | - | - | 20 | 20 | - | 20 | - | - | - |
| OTHER LATIN AMERICA..... | 564 | - | 400 | - | 25 | 25 | - | 25 | - | 139 | 139 |
| AUSTRALIA..... | 360 | - | 18 | - | 130 | 130 | 163 | 130 | 163 | 49 | 49 |
| CANADA..... | 3,336 | - | 2,159 | - | 489 | 360 | 40 | 360 | 40 | 648 | 648 |
| NEW ZEALAND..... | 39 | - | 8 | - | 15 | 15 | - | 15 | - | 16 | 16 |
| INTERNATIONAL ORGANIZATIONS..... | 1,150 | - | - | - | 1,150 | 950 | - | 950 | - | - | - |

TABLE C-76. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| REGION AND COUNTRY | TOTAL | DEPARTMENT OF AGRICULTURE | DEPARTMENT OF DEFENSE | DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE | | ATOMIC ENERGY COMMISSION | OTHER |
|----------------------------|--------|---------------------------|-----------------------|--|-------------------------------|--------------------------|-------|
| | | | | TOTAL | NATIONAL INSTITUTES OF HEALTH | | |
| TOTAL, ALL COUNTRIES..... | 14,622 | 3,942 | 1,552 | 6,075 | 5,892 | 176 | 2,877 |
| EUROPE, TOTAL..... | 4,063 | 1,370 | 685 | 1,605 | 1,511 | 100 | 303 |
| AUSTRIA..... | 30 | - | 25 | - | - | - | 5 |
| BELGIUM..... | 99 | - | 84 | 15 | 15 | - | - |
| DENMARK..... | 66 | - | - | 66 | 66 | - | - |
| FINLAND..... | 35 | - | - | 35 | 29 | - | - |
| FRANCE..... | 100 | - | 25 | 33 | 18 | - | 42 |
| ICELAND..... | 59 | - | - | - | - | 59 | - |
| IRELAND..... | 5 | - | 5 | - | - | - | - |
| ITALY..... | 268 | 103 | 128 | 8 | 4 | 25 | 4 |
| NETHERLANDS..... | 27 | - | 27 | - | - | - | - |
| NORWAY..... | 8 | - | 8 | - | - | - | - |
| POLAND..... | 1,167 | 513 | - | 654 | 654 | - | - |
| SPAIN..... | 41 | - | 15 | 1 | 1 | - | 25 |
| SWEDEN..... | 395 | - | 46 | 229 | 199 | - | 120 |
| SWITZERLAND..... | 47 | - | - | - | - | - | 47 |
| UNITED KINGDOM, TOTAL..... | 466 | 43 | 286 | 78 | 39 | - | 59 |
| ENGLAND..... | 365 | - | 260 | 78 | 39 | - | 27 |
| SCOTLAND..... | 56 | - | 26 | - | - | - | 30 |
| OTHER UNITED KINGDOM..... | 45 | 43 | - | - | - | - | 2 |
| WEST GERMANY..... | 60 | 7 | 36 | - | - | 16 | 1 |
| YUGOSLAVIA..... | 1,190 | 704 | - | 486 | 486 | - | - |
| ASIA, TOTAL..... | 3,335 | 1,357 | 124 | 1,659 | 1,659 | - | 195 |
| INDIA..... | 1,469 | 826 | - | 450 | 450 | - | 193 |
| JAPAN..... | 121 | - | 69 | 51 | 51 | - | 1 |
| MALAYSIA..... | 24 | - | 24 | - | - | - | - |
| PAKISTAN..... | 1,662 | 531 | - | 1,131 | 1,131 | - | - |
| TAIWAN..... | 40 | - | 31 | 9 | 9 | - | - |
| THAILAND..... | 18 | - | - | 18 | 18 | - | - |
| OTHER ASIA..... | 1 | - | - | - | - | - | 1 |
| NEAR EAST, TOTAL..... | 3,937 | 1,161 | 315 | 2,028 | 1,997 | 32 | 401 |
| GREECE..... | 3 | - | 3 | - | - | - | - |
| ISRAEL..... | 3,707 | 1,138 | 312 | 1,824 | 1,793 | 32 | 401 |
| LEBANON..... | 36 | - | - | 36 | 36 | - | - |
| UNITED ARAB REPUBLIC..... | 191 | 23 | - | 168 | 168 | - | - |
| AFRICA, TOTAL..... | 150 | 54 | - | 38 | 38 | - | 58 |
| KENYA..... | 58 | - | - | - | - | - | 58 |
| NIGERIA..... | 38 | - | - | 38 | 38 | - | - |
| OTHER AFRICA..... | 54 | 54 | - | - | - | - | - |
| LATIN AMERICA, TOTAL..... | 2,409 | - | 152 | 544 | 544 | 32 | 1,681 |
| ARGENTINA..... | 73 | - | 28 | 34 | 34 | 11 | - |
| BOLIVIA..... | 11 | - | 11 | - | - | - | - |
| BRAZIL..... | 120 | - | 92 | 7 | 7 | 21 | - |
| CHILE..... | 1,558 | - | 18 | - | - | - | 1,540 |
| COSTA RICA..... | 33 | - | - | - | - | - | 33 |
| MEXICO..... | 3 | - | - | 3 | 3 | - | - |
| PANAMA..... | 500 | - | - | 500 | 500 | - | - |

TABLE C-77. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS, BY REGION, COUNTRY, AND AGENCY, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| REGION AND COUNTRY | TOTAL | DEPARTMENT OF AGRICULTURE | DEPARTMENT OF DEFENSE | DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE | | ATOMIC ENERGY COMMISSION | OTHER |
|----------------------------|--------|---------------------------|-----------------------|--|-------------------------------|--------------------------|-------|
| | | | | TOTAL | NATIONAL INSTITUTES OF HEALTH | | |
| TOTAL, ALL COUNTRIES..... | 21,659 | 4,696 | 1,319 | 11,932 | 11,770 | 116 | 3,596 |
| EUROPE, TOTAL..... | 8,726 | 2,187 | 686 | 4,943 | 4,843 | 73 | 837 |
| AUSTRIA..... | 41 | - | 36 | - | - | - | 5 |
| BELGIUM..... | 96 | - | 81 | 14 | 14 | - | 1 |
| DENMARK..... | 59 | - | - | 59 | 59 | - | - |
| FINLAND..... | 28 | 1 | - | 27 | 27 | - | - |
| FRANCE..... | 93 | 4 | 57 | 31 | 18 | 32 | 1 |
| ICELAND..... | 32 | - | - | - | - | - | - |
| IRELAND..... | 10 | - | 10 | - | - | - | - |
| ITALY..... | 255 | 105 | 113 | 8 | 4 | 25 | 4 |
| NETHERLANDS..... | 31 | 1 | 30 | - | - | - | - |
| NORWAY..... | 8 | - | 8 | - | - | - | - |
| POLAND..... | 2,688 | 332 | - | 2,356 | 2,356 | - | - |
| SPAIN..... | 55 | 1 | 30 | 2 | 2 | - | 22 |
| SWEDEN..... | 354 | 1 | - | 233 | 190 | - | 120 |
| SWITZERLAND..... | 51 | - | - | - | - | - | 51 |
| UNITED KINGDOM, TOTAL..... | 495 | 79 | 265 | 86 | 38 | - | 65 |
| ENGLAND..... | 350 | - | 242 | 96 | 38 | - | 22 |
| SCOTLAND..... | 63 | - | 23 | - | - | - | 40 |
| OTHER UNITED KINGDOM..... | 82 | 79 | 56 | - | - | 16 | 3 |
| WEST GERMANY..... | 86 | 3 | - | - | - | - | 11 |
| YUGOSLAVIA..... | 4,344 | 1,600 | - | 2,127 | 2,127 | - | 557 |
| ASIA, TOTAL..... | 5,449 | 1,728 | 107 | 3,147 | 3,147 | - | 467 |
| INDIA..... | 3,532 | 824 | 15 | 2,239 | 2,239 | - | 454 |
| JAPAN..... | 88 | 3 | 50 | 23 | 23 | - | 12 |
| MALAYSIA..... | 23 | - | 23 | - | - | - | - |
| PAKISTAN..... | 1,759 | 901 | - | 858 | 858 | - | - |
| TAIWAN..... | 29 | - | 19 | 10 | 10 | - | - |
| THAILAND..... | 17 | - | - | 17 | 17 | - | - |
| OTHER ASIA..... | 1 | - | - | - | - | - | 1 |
| NEAR EAST, TOTAL..... | 3,410 | 530 | 193 | 2,322 | 2,287 | 32 | 333 |
| GREECE..... | 3 | - | 3 | - | - | - | - |
| ISRAEL..... | 2,630 | 462 | 190 | 1,613 | 1,578 | 22 | 333 |
| LEBANON..... | 33 | - | - | 33 | 33 | - | - |
| TURKEY..... | 1 | 1 | - | - | - | - | - |
| UNITED ARAB REPUBLIC..... | 743 | 67 | - | 676 | 676 | - | - |
| AFRICA, TOTAL..... | 1,146 | 251 | - | 817 | 817 | - | 78 |
| KENYA..... | 65 | - | - | - | - | - | 65 |
| NIGERIA..... | 35 | - | - | 35 | 35 | - | - |
| UNION OF SOUTH AFRICA..... | 13 | - | - | - | - | - | 13 |
| OTHER AFRICA..... | 1,033 | 251 | - | 782 | 782 | - | - |
| LATIN AMERICA, TOTAL..... | 2,397 | - | 115 | 549 | 543 | 11 | 1,722 |
| ARGENTINA..... | 33 | - | - | 33 | 33 | - | - |
| BRAZIL..... | 93 | - | 75 | 7 | 7 | 11 | - |
| CHILE..... | 1,637 | - | 20 | - | - | - | 1,617 |
| COLOMBIA..... | 6 | - | - | 6 | - | - | - |
| COSTA RICA..... | 35 | - | - | - | - | - | 35 |
| MEXICO..... | 3 | - | - | 3 | 3 | - | - |
| PANAMA..... | 500 | - | - | 500 | 500 | - | - |
| PERU..... | 60 | - | 20 | - | - | - | 40 |
| OTHER LATIN AMERICA..... | 30 | - | - | - | - | - | 30 |
| AUSTRALIA..... | 113 | - | 18 | 46 | 46 | - | 49 |
| CANADA..... | 391 | - | 192 | 105 | 84 | - | 94 |
| NEW ZEALAND..... | 27 | - | 8 | 3 | 3 | - | 16 |

TABLE C-78. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT TO FOREIGN PERFORMERS AND AMOUNT SUPPORTED THROUGH THE SPECIAL FOREIGN CURRENCY PROGRAM, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | | ESTIMATES | | | |
|--|--------------|----------------------------------|-----------|----------------------------------|--------|----------------------------------|
| | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM | 1971 | | 1972 | |
| | | | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM |
| TOTAL, ALL AGENCIES..... | 40,228 | 17,259 | 67,688 | 44,454 | 76,138 | 55,134 |
| DEPARTMENTS | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 5,494 | 5,494 | 6,601 | 6,601 | 11,200 | 11,200 |
| AGRICULTURAL RESEARCH SERVICE..... | 4,867 | 4,867 | 5,976 | 5,976 | 10,000 | 10,000 |
| FOREST SERVICE..... | 627 | 627 | 625 | 625 | 1,200 | 1,200 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 1,577 | 1,251 | 1,556 | 1,370 | 1,234 | 1,054 |
| NATIONAL BUREAU OF STANDARDS..... | 701 | 696 | 626 | 615 | 360 | 360 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 876 | 555 | 930 | 755 | 874 | 699 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 10,197 | 1,146 | 8,076 | 883 | 8,694 | 3,169 |
| DEPARTMENT OF THE ARMY..... | 3,006 | - | 1,792 | - | 1,124 | - |
| DEPARTMENT OF THE NAVY..... | 3,696 | 1,146 | 4,410 | 883 | 5,525 | 3,169 |
| DEPARTMENT OF THE AIR FORCE..... | 1,324 | - | 1,128 | - | 1,150 | - |
| DEFENSE AGENCIES..... | 2,171 | - | 746 | - | 895 | - |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 15,639 | 9,368 | 37,708 | 31,853 | 39,825 | 33,666 |
| FOOD AND DRUG ADMINISTRATION..... | 476 | 476 | 2,027 | 2,027 | 5,142 | 5,142 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 2,947 | 1,963 | 15,916 | 15,161 | 9,843 | 8,984 |
| NATIONAL INSTITUTES OF HEALTH..... | 9,777 | 4,503 | 15,540 | 10,440 | 14,090 | 8,790 |
| OFFICE OF EDUCATION..... | 13 | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 2,426 | 2,426 | 4,225 | 4,225 | 10,000 | 10,000 |
| SOCIAL SECURITY ADMINISTRATION..... | - | - | - | - | 750 | 750 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 6 | - | 178 | - | 500 | 500 |
| BONNEVILLE POWER ADMINISTRATION..... | 6 | - | 178 | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | 500 | 500 |
| POSTAL SERVICE..... | 371 | - | - | - | 500 | - |
| DEPARTMENT OF STATE, TOTAL..... | 2,437 | - | 5,318 | - | 4,787 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 2,437 | - | 5,318 | - | 4,787 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | - | - | 48 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | - | - | 48 | - | - | - |
| OTHER AGENCIES | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 681 | - | 943 | - | 1,227 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 674 | - | 3,870 | 3,147 | 4,571 | 4,340 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 1,388 | - | 1,503 | - | 1,504 | - |
| NATIONAL SCIENCE FOUNDATION..... | 1,764 | - | 1,887 | 600 | 2,096 | 1,200 |

TABLE C-79. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO FOREIGN PERFORMERS AND AMOUNT SUPPORTED THROUGH THE SPECIAL FOREIGN CURRENCY PROGRAM, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | | ESTIMATES | | | |
|--|--------------|----------------------------------|-----------|----------------------------------|--------|----------------------------------|
| | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM |
| TOTAL, ALL AGENCIES..... | 14,622 | 9,000 | 21,659 | 17,048 | 23,834 | 19,506 |
| DEPARTMENTS | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 3,942 | 3,942 | 4,696 | 4,696 | 8,012 | 8,012 |
| AGRICULTURAL RESEARCH SERVICE..... | 3,315 | 3,315 | 4,071 | 4,071 | 6,812 | 6,812 |
| FOREST SERVICE..... | 627 | 627 | 625 | 625 | 1,200 | 1,200 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 876 | 555 | 931 | 755 | 864 | 699 |
| NATIONAL BUREAU OF STANDARDS..... | - | - | 11 | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 876 | 555 | 920 | 755 | 864 | 699 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,552 | - | 1,319 | - | 1,349 | - |
| DEPARTMENT OF THE ARMY..... | 591 | - | 707 | - | 790 | - |
| DEPARTMENT OF THE NAVY..... | 263 | - | 139 | - | 109 | - |
| DEPARTMENT OF THE AIR FORCE..... | 698 | - | 473 | - | 450 | - |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 6,075 | 4,503 | 11,932 | 10,440 | 10,368 | 8,790 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 183 | - | 162 | - | 193 | - |
| NATIONAL INSTITUTES OF HEALTH..... | 5,892 | 4,503 | 11,770 | 10,440 | 10,175 | 8,790 |
| OTHER AGENCIES | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 176 | - | 116 | - | 120 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 33 | - | 588 | 557 | 836 | 805 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 204 | - | 190 | - | 189 | - |
| NATIONAL SCIENCE FOUNDATION..... | 1,764 | - | 1,887 | 600 | 2,096 | 1,200 |

TABLE C-80. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH TO FOREIGN PERFORMERS AND AMOUNT SUPPORTED THROUGH THE SPECIAL FOREIGN CURRENCY PROGRAM, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | | ESTIMATES | | | |
|--|--------------|----------------------------------|-----------|----------------------------------|--------|----------------------------------|
| | | | 1971 | | 1972 | |
| | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM |
| TOTAL, ALL AGENCIES..... | 17,147 | 6,333 | 33,641 | 22,912 | 37,975 | 27,941 |
| DEPARTMENTS | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 1,552 | 1,552 | 1,905 | 1,905 | 3,188 | 3,188 |
| AGRICULTURAL RESEARCH SERVICE..... | 1,552 | 1,552 | 1,905 | 1,905 | 3,188 | 3,188 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 406 | 401 | 364 | 354 | 212 | 202 |
| NATIONAL BUREAU OF STANDARDS..... | 406 | 401 | 354 | 354 | 202 | 202 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | - | - | 10 | - | 10 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 3,226 | - | 1,671 | - | 1,573 | - |
| DEPARTMENT OF THE ARMY..... | 684 | - | 480 | - | 278 | - |
| DEPARTMENT OF THE AIR FORCE..... | 371 | - | 445 | - | 400 | - |
| DEFENSE AGENCIES..... | 2,171 | - | 746 | - | 895 | - |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 9,041 | 4,380 | 24,864 | 20,653 | 28,605 | 24,176 |
| FOOD AND DRUG ADMINISTRATION..... | 476 | 476 | 2,027 | 2,027 | 5,142 | 5,142 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 2,738 | 1,963 | 15,614 | 15,161 | 9,510 | 8,984 |
| NATIONAL INSTITUTES OF HEALTH..... | 3,873 | - | 3,758 | - | 3,903 | - |
| OFFICE OF EDUCATION..... | 13 | - | - | - | - | - |
| SOCIAL AND REHABILITATION SERVICE..... | 1,941 | 1,941 | 3,465 | 3,465 | 9,300 | 9,300 |
| SOCIAL SECURITY ADMINISTRATION..... | - | - | - | - | 750 | 750 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | - | - | - | - | 375 | 375 |
| OFFICE OF THE SECRETARY..... | - | - | - | - | 375 | 375 |
| DEPARTMENT OF STATE, TOTAL..... | 689 | - | 2,519 | - | 2,250 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 689 | - | 2,519 | - | 2,250 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | - | - | 48 | - | - | - |
| FEDERAL RAILROAD ADMINISTRATION..... | - | - | 48 | - | - | - |
| OTHER AGENCIES | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 462 | - | 515 | - | 507 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 641 | - | 692 | - | 200 | - |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 1,130 | - | 1,063 | - | 1,065 | - |

TABLE C-81. FEDERAL OBLIGATIONS FOR DEVELOPMENT TO FOREIGN PERFORMERS AND AMOUNT SUPPORTED THROUGH THE SPECIAL FOREIGN CURRENCY PROGRAM, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | | ESTIMATES | | | |
|--|--------------|----------------------------------|-----------|----------------------------------|--------|----------------------------------|
| | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM | 1971 | | 1972 | |
| | | | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM | TOTAL | SPECIAL FOREIGN CURRENCY PROGRAM |
| TOTAL, ALL AGENCIES..... | 8,459 | 1,926 | 12,388 | 4,494 | 14,329 | 7,687 |
| DEPARTMENTS | | | | | | |
| DEPARTMENT OF COMMERCE, TOTAL..... | 295 | 295 | 261 | 261 | 158 | 158 |
| NATIONAL BUREAU OF STANDARDS..... | 295 | 295 | 261 | 261 | 158 | 158 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 5,419 | 1,146 | 5,086 | 883 | 5,772 | 3,169 |
| DEPARTMENT OF THE ARMY..... | 1,731 | - | 605 | - | 56 | - |
| DEPARTMENT OF THE NAVY..... | 3,433 | 1,146 | 4,271 | 883 | 5,416 | 3,169 |
| DEPARTMENT OF THE AIR FORCE..... | 255 | - | 210 | - | 300 | - |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 523 | 485 | 912 | 760 | 852 | 700 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 26 | - | 140 | - | 140 | - |
| NATIONAL INSTITUTES OF HEALTH..... | 12 | - | 12 | - | 12 | - |
| SOCIAL AND REHABILITATION SERVICE..... | 485 | 485 | 760 | 760 | 700 | 700 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 6 | - | 178 | - | 125 | 125 |
| BONNEVILLE POWER ADMINISTRATION..... | 6 | - | 178 | - | - | - |
| OFFICE OF THE SECRETARY..... | - | - | - | - | 125 | 125 |
| POSTAL SERVICE..... | 371 | - | - | - | 500 | - |
| DEPARTMENT OF STATE, TOTAL..... | 1,748 | - | 2,799 | - | 2,537 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 1,748 | - | 2,799 | - | 2,537 | - |
| OTHER AGENCIES | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 43 | - | 312 | - | 600 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | - | - | 2,590 | 2,590 | 3,535 | - |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 54 | - | 250 | - | 250 | - |

Table C-82. Federal obligations for research, development, and R&D plant,
by geographic division and State, fiscal year 1970

[Dollars in thousands]

| Geographic division and State | Research, development, and R&D plant | Research and development | R&D plant |
|-------------------------------|--|-----------------------------|-----------|
| United States, total..... | \$15,500,365 | \$14,980,751 | \$519,614 |
| New England..... | 1,015,810 | 1,000,840 | 14,970 |
| Connecticut..... | 162,792 | 160,027 | 2,765 |
| Maine..... | 13,384 | 13,262 | 122 |
| Massachusetts..... | 771,597 | 760,920 | 10,677 |
| New Hampshire..... | 27,310 | 27,268 | 42 |
| Rhode Island..... | 31,237 | 29,911 | 1,326 |
| Vermont..... | 9,490 | 9,452 | 38 |
| Middle Atlantic..... | 2,568,394 | 2,516,881 | 51,513 |
| New Jersey..... | 748,157 | 742,526 | 5,631 |
| New York..... | 1,262,261 | 1,235,594 | 26,667 |
| Pennsylvania..... | 557,976 | 538,761 | 19,215 |
| East North Central..... | 1,158,647 | 1,038,771 | 119,876 |
| Illinois..... | 334,302 | 239,563 | 94,739 |
| Indiana..... | 92,323 | 91,905 | 418 |
| Michigan..... | 166,625 | 162,818 | 3,807 |
| Ohio..... | 477,654 | 457,342 | 20,312 |
| Wisconsin..... | 87,743 | 87,143 | 600 |
| West North Central..... | 484,638 | 475,375 | 9,263 |
| Iowa..... | 33,813 | 32,661 | 1,152 |
| Kansas..... | 16,731 | 16,546 | 85 |
| Minnesota..... | 110,048 | 109,270 | 778 |
| Missouri..... | 295,428 | 291,181 | 4,247 |
| Nebraska..... | 11,506 | 10,648 | 858 |
| North Dakota..... | 8,944 | 8,878 | 66 |
| South Dakota..... | 8,168 | 6,091 | 2,077 |
| South Atlantic..... | 2,971,532 | 2,899,225 | 72,303 |
| Delaware..... | 16,311 | 16,299 | 12 |
| District of Columbia..... | 474,918 | 468,493 | 6,425 |
| Florida..... | 858,025 | 824,785 | 33,240 |
| Georgia..... | 74,291 | 72,265 | 2,026 |
| Maryland..... | 1,083,641 | 1,063,359 | 20,282 |
| North Carolina..... | 67,052 | 63,908 | 3,144 |
| South Carolina..... | 19,558 | 17,804 | 1,754 |
| Virginia..... | 356,234 | 352,685 | 3,549 |
| West Virginia..... | 21,502 | 19,631 | 1,871 |
| East South Central..... | 616,511 | 599,724 | 16,787 |
| Alabama..... | 359,006 | 357,221 | 1,785 |
| Kentucky..... | 21,226 | 20,413 | 813 |
| Mississippi..... | 29,088 | 28,276 | 812 |
| Tennessee..... | 207,191 | 193,814 | 13,377 |
| West South Central..... | 844,244 | 834,880 | 9,364 |
| Arkansas..... | 9,862 | 9,787 | 75 |
| Louisiana..... | 147,577 | 146,488 | 1,089 |
| Oklahoma..... | 29,610 | 29,483 | 127 |
| Texas..... | 657,195 | 649,122 | 8,073 |
| Mountain..... | 1,249,187 | 1,136,820 | 112,367 |
| Arizona..... | 74,436 | 72,803 | 1,633 |
| Colorado..... | 279,325 | 274,113 | 5,212 |
| Idaho..... | 98,051 | 75,008 | 23,043 |
| Montana..... | 11,694 | 11,646 | 48 |
| Nevada..... | 208,171 | 190,948 | 17,223 |
| New Mexico..... | 507,655 | 444,089 | 63,606 |
| Utah..... | 62,026 | 61,052 | 974 |
| Wyoming..... | 7,789 | 7,161 | 628 |
| Pacific..... | 4,508,557 | 4,404,125 | 104,432 |
| Alaska..... | 43,638 | 43,179 | 459 |
| California..... | 3,956,981 | 3,871,053 | 85,928 |
| Hawaii..... | 44,321 | 43,815 | 506 |
| Oregon..... | 36,117 | 33,848 | 2,269 |
| Washington..... | 427,500 | 412,230 | 15,270 |
| Outlying Areas..... | 20,737 | 17,280 | 3,457 |
| Offices Abroad..... | 62,108 | 56,826 | 5,282 |

TABLE C-83. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY STATE AND PERFORMER

FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS) | | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | |
|--|--|------------|------------------------------|---------------------|---|---------------------------------|--|---|--|--------|
| | | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY INDUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NONPROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NONPROFIT INSTI- TUTIONS | OTHER |
| TOTAL, ALL STATES | | 14,980,751 | 3,729,333 | 7,862,204 | 430,403 | 1,438,415 | 748,391 | 435,596 | 247,771 | 88,638 |
| CALIFORNIA | | 3,871,053 | 57,625 | 2,607,021 | 31,723 | 205,835 | 308,257 | 63,179 | 96,531 | 10,882 |
| NEW YORK | | 1,235,594 | 77,786 | 791,155 | 52,157 | 166,690 | 58,909 | 71,695 | 3,484 | 13,718 |
| MARYLAND | | 1,063,359 | 659,019 | 295,838 | - | 40,071 | 52,449 | 6,233 | 5,540 | 4,209 |
| FLORIDA | | 824,785 | 321,497 | 467,791 | - | 31,106 | - | 2,399 | - | 1,992 |
| MASS | | 760,920 | 116,626 | 344,814 | - | 150,649 | 61,842 | 43,786 | 39,486 | 3,717 |
| NEW JERSEY | | 742,526 | 152,773 | 544,941 | - | 23,791 | 11,588 | 6,731 | - | 2,702 |
| TEXAS | | 649,122 | 170,034 | 407,498 | - | 58,997 | - | 6,163 | - | 4,168 |
| PENN | | 538,761 | 103,077 | 272,659 | 56,852 | 68,234 | 9,092 | 21,458 | 2,262 | 3,992 |
| DIST OF COL | | 468,493 | 326,455 | 70,214 | - | 16,945 | 1,532 | 47,920 | - | 5,427 |
| OHIO | | 457,342 | 204,982 | 170,399 | 4,777 | 41,328 | - | 33,009 | - | 2,847 |
| NEW MEXICO | | 444,089 | 138,774 | 50,555 | 137,507 | 9,942 | 99,819 | 6,146 | 956 | 390 |
| WASHINGTON | | 412,230 | 18,836 | 297,525 | 338 | 33,229 | 2,540 | 4,293 | 53,542 | 1,927 |
| ALABAMA | | 357,221 | 176,435 | 164,500 | - | 12,116 | - | 3,642 | - | 528 |
| VIRGINIA | | 352,685 | 218,182 | 83,401 | - | 16,134 | 1,161 | 6,934 | 25,534 | 1,339 |
| MISSOURI | | 291,181 | 15,900 | 237,707 | - | 27,703 | - | 4,885 | 4,210 | 776 |
| COLORADO | | 274,113 | 41,189 | 181,669 | - | 29,156 | 12,968 | 7,930 | - | 1,201 |
| ILLINOIS | | 239,563 | 27,253 | 22,221 | - | 81,289 | 76,933 | 27,936 | 473 | 3,458 |
| TENNESSEE | | 193,814 | 9,233 | 74,785 | 82,224 | 19,449 | 1,868 | 5,513 | - | 742 |
| NEVADA | | 190,948 | 35,302 | 138,593 | 3,956 | 2,711 | 9,746 | 369 | - | 271 |
| MICHIGAN | | 162,818 | 25,111 | 81,355 | - | 49,894 | - | 4,295 | - | 2,163 |
| CONNECTICUT | | 160,027 | 27,919 | 103,593 | - | 25,713 | - | 2,148 | - | 654 |
| LOUISIANA | | 146,488 | 19,010 | 107,902 | - | 15,286 | - | 2,344 | - | 1,946 |
| MINNESOTA | | 109,270 | 7,988 | 67,755 | - | 24,866 | - | 6,518 | 958 | 1,185 |
| INDIANA | | 91,905 | 14,016 | 51,508 | - | 24,666 | - | 1,154 | - | 561 |
| WISCONSIN | | 87,143 | 9,335 | 30,192 | - | 37,840 | 2,578 | 6,513 | - | 685 |
| IDAHO | | 75,008 | 4,661 | - | 52,092 | 1,821 | 13,443 | 133 | 2,429 | 429 |
| ARIZONA | | 72,803 | 31,606 | 23,804 | - | 8,608 | 6,419 | 1,852 | - | 514 |
| GEORGIA | | 72,265 | 21,943 | 21,635 | - | 22,603 | 339 | 3,843 | 720 | 1,182 |
| N CAROLINA | | 63,908 | 12,963 | 5,632 | - | 37,148 | - | 6,162 | 1,152 | 851 |
| UTAH | | 61,052 | 21,712 | 19,047 | - | 15,689 | 656 | 3,249 | - | 699 |
| HAWAII | | 43,815 | 9,231 | 21,149 | - | 10,756 | - | 1,833 | - | 846 |
| ALASKA | | 43,179 | 10,849 | 23,886 | - | 5,586 | - | 1,187 | - | 1,671 |
| OREGON | | 33,848 | 8,338 | 127 | - | 14,898 | 596 | 6,401 | 1,841 | 1,647 |
| IOWA | | 32,661 | 5,976 | 3,381 | - | 14,781 | 7,476 | 528 | - | 519 |
| RHODE ISL | | 29,911 | 11,553 | 7,207 | - | 9,637 | - | 1,164 | - | 350 |
| OKLAHOMA | | 29,483 | 12,164 | 4,538 | - | 8,230 | - | 3,837 | - | 714 |
| MISSISSIPPI | | 28,276 | 16,918 | 1,631 | - | 6,121 | - | 2,991 | - | 615 |
| NEW HAMPSHIRE | | 27,268 | 4,236 | 15,614 | - | 7,133 | - | 35 | - | 250 |
| KENTUCKY | | 20,413 | 9,237 | 737 | - | 9,191 | - | 631 | - | 617 |
| W VIRGINIA | | 19,631 | 5,818 | 770 | - | 5,475 | 5,180 | 566 | 1,126 | 696 |
| S CAROLINA | | 17,804 | 2,739 | 154 | 8,777 | 4,738 | - | 1,050 | - | 344 |
| KANSAS | | 16,646 | 2,495 | 2,512 | - | - | - | - | - | - |

| | 74,500 | 104,775 | 544,941 | - | 23,751 | 11,548 | 6,751 | - | 2,732 |
|---------------|---------|---------|---------|---------|--------|--------|--------|--------|-------|
| TEXAS | 649,122 | 170,234 | 407,498 | - | 58,997 | - | 6,163 | - | 4,168 |
| PENN | 538,761 | 103,077 | 272,659 | 56,852 | 68,234 | 9,092 | 21,458 | 2,262 | 3,992 |
| DIST OF COL | 468,493 | 326,455 | 70,214 | - | 16,945 | 1,532 | 47,920 | 3,397 | 5,427 |
| OHIO | 457,342 | 204,982 | 170,399 | 4,777 | 41,328 | - | 33,009 | - | 2,847 |
| NEW MEXICO | 444,089 | 138,774 | 50,555 | 137,507 | 9,942 | 99,819 | 6,146 | 956 | 390 |
| WASHINGTON | 412,230 | 18,836 | 297,525 | 338 | 33,229 | 2,540 | 4,293 | 53,542 | 1,927 |
| ALABAMA | 357,221 | 176,435 | 164,500 | - | 12,116 | - | 3,642 | - | 528 |
| VIRGINIA | 352,685 | 218,182 | 83,401 | - | 16,134 | 1,161 | 6,934 | 25,534 | 1,339 |
| MISSOURI | 291,181 | 15,900 | 237,707 | - | 27,703 | - | 4,885 | 4,210 | 776 |
| COLORADO | 274,113 | 41,189 | 181,669 | - | 29,156 | 12,968 | 7,930 | - | 1,201 |
| ILLINOIS | 239,563 | 27,253 | 22,221 | - | 81,289 | 76,933 | 27,936 | 473 | 3,458 |
| TENNESSEE | 193,814 | 9,233 | 74,785 | 82,224 | 19,449 | 1,868 | 5,513 | - | 742 |
| NEVADA | 190,948 | 35,302 | 138,593 | 3,956 | 2,711 | 9,746 | 369 | - | 271 |
| MICHIGAN | 162,818 | 25,111 | 81,355 | - | 49,894 | - | 4,295 | - | 2,163 |
| CONNECTICUT | 160,027 | 27,919 | 103,593 | - | 25,713 | - | 2,148 | - | 654 |
| LOUISIANA | 146,488 | 19,010 | 107,902 | - | 15,286 | - | 2,344 | - | 1,946 |
| MINNESOTA | 109,270 | 7,988 | 67,755 | - | 24,866 | - | 6,518 | 958 | 1,185 |
| INDIANA | 91,905 | 14,016 | 51,508 | - | 24,666 | - | 1,154 | - | 561 |
| WISCONSIN | 87,143 | 9,335 | 30,192 | - | 37,840 | 2,578 | 6,513 | - | 685 |
| IDAHO | 75,008 | 4,661 | - | 52,092 | 1,821 | 13,443 | 133 | 2,429 | 429 |
| ARIZONA | 72,803 | 31,606 | 23,804 | - | 8,608 | 6,419 | 1,852 | - | 514 |
| GEORGIA | 72,265 | 21,943 | 21,635 | - | 22,603 | 339 | 3,843 | 720 | 1,182 |
| N CAROLINA | 63,908 | 12,963 | 5,632 | - | 37,148 | - | 6,162 | 1,152 | 851 |
| UTAH | 61,052 | 21,712 | 19,047 | - | 15,689 | 656 | 3,249 | - | 699 |
| HAWAII | 43,815 | 9,231 | 21,149 | - | 10,756 | - | 1,833 | - | 846 |
| ALASKA | 43,179 | 10,849 | 23,886 | - | 5,586 | - | 1,187 | - | 1,671 |
| OREGON | 33,848 | 8,338 | 127 | - | 14,898 | 596 | 6,401 | 1,841 | 1,647 |
| IOWA | 32,661 | 5,976 | 3,381 | - | 14,781 | 7,476 | 528 | - | 519 |
| RHODE ISL | 29,911 | 11,553 | 7,207 | - | 9,637 | - | 1,164 | - | 350 |
| OKLAHOMA | 29,483 | 12,164 | 4,538 | - | 8,230 | - | 3,837 | - | 714 |
| MISSISSIPPI | 28,276 | 16,918 | 1,631 | - | 6,121 | - | 2,991 | - | 615 |
| NEW HAMPSHIRE | 27,268 | 4,236 | 15,614 | - | 7,133 | - | 35 | - | 250 |
| KENTUCKY | 20,413 | 9,237 | 737 | - | 9,191 | - | 631 | - | 617 |
| W VIRGINIA | 19,631 | 5,818 | 770 | - | 5,475 | 5,180 | 566 | 1,126 | 696 |
| S CAROLINA | 17,804 | 2,739 | 154 | 8,777 | 4,738 | - | 1,050 | - | 346 |
| KANSAS | 16,646 | 2,495 | 2,512 | - | 10,844 | - | 303 | - | 492 |
| DELAWARE | 16,299 | 780 | 13,699 | - | 1,593 | - | 131 | - | 96 |
| MAINE | 13,262 | 3,504 | 5,465 | - | 1,426 | - | 1,930 | - | 937 |
| MONTANA | 11,646 | 5,827 | 1,933 | - | 2,556 | - | 772 | - | 558 |
| NEBRASKA | 10,648 | 2,317 | 2,500 | - | 5,167 | - | 121 | - | 543 |
| ARKANSAS | 9,787 | 1,072 | 2,236 | - | 4,796 | - | 880 | - | 803 |
| VERMONT | 9,452 | 557 | 4,292 | - | 3,490 | - | 814 | - | 299 |
| N DAKOTA | 8,878 | 4,772 | 5 | - | 2,545 | - | 1,221 | - | 335 |
| WYOMING | 7,161 | 4,224 | 1 | - | 2,662 | - | 15 | - | 259 |
| S DAKOTA | 6,091 | 1,743 | 874 | - | 2,549 | - | 455 | - | 470 |
| OUT AREAS | 17,280 | 4,397 | 6,630 | - | 4,277 | 1,400 | 156 | - | 420 |
| OFF ABROAD | 56,826 | 43,344 | 7,154 | - | 455 | 1,600 | 143 | 4,130 | - |

(1) FEDERAL INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE. (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION)

NOTE- THE OBLIGATIONS OF THE TEN MAJOR R&D SUPPORTING AGENCIES INCLUDED IN THIS TABLE REPRESENT MORE THAN 98 PERCENT OF TOTAL FEDERAL R&D OBLIGATIONS IN FY 1970.

TABLE C-83A. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT
TO EACH PERFORMER, BY STATE, FISCAL YEAR 1970

| STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS) | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | OTHER NONPROFIT INSTITUTIONS | FFRDCS ADMIN BY NONPROFIT INSTITUTIONS | OTHER |
|--|-------|------------------------------|---------------------|---|---------------------------------|---|------------------------------------|-------|------------------------------------|---|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY INDUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NONPROFIT INSTITUTIONS | | | | |
| TOTAL, ALL STATES | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| CALIFORNIA | 25.8 | 14.7 | 33.2 | 7.4 | 14.3 | 41.2 | 14.5 | 39.0 | 12.3 | 12.3 | 12.3 |
| NEW YORK | 8.2 | 2.1 | 10.1 | 12.1 | 11.6 | 7.9 | 16.5 | 1.4 | 15.5 | 15.5 | 15.5 |
| MARYLAND | 7.1 | 17.7 | 3.8 | - | 2.8 | 7.0 | 1.4 | 2.2 | 4.7 | 4.7 | 4.7 |
| FLORIDA | 5.5 | 8.6 | 5.9 | - | 2.2 | - | .6 | - | 2.2 | 2.2 | 2.2 |
| MASS | 5.1 | 3.1 | 4.4 | - | 10.5 | 8.3 | 10.1 | 15.9 | 4.2 | 4.2 | 4.2 |
| NEW JERSEY | 5.0 | 4.1 | 6.9 | - | 1.7 | 1.5 | 1.5 | - | 3.0 | 3.0 | 3.0 |
| TEXAS | 4.3 | 4.6 | 5.2 | - | 4.1 | - | 1.4 | .9 | 4.7 | 4.7 | 4.7 |
| PENN | 3.6 | 2.8 | 3.5 | 13.2 | 4.7 | 1.2 | 4.9 | 1.4 | 4.5 | 4.5 | 4.5 |
| DIST OF COL | 3.1 | 8.8 | .9 | - | 1.2 | .2 | 11.0 | - | 6.1 | 6.1 | 6.1 |
| OHIO | 3.1 | 5.5 | 2.2 | 1.1 | 2.9 | - | 7.6 | - | 3.2 | 3.2 | 3.2 |
| NEW MEXICO | 3.0 | 3.7 | .6 | 31.9 | .7 | 13.3 | 1.4 | .4 | .4 | .4 | .4 |
| WASHINGTON | 2.8 | .5 | 3.8 | .1 | 2.3 | .3 | 1.0 | 21.6 | 2.2 | 2.2 | 2.2 |
| ALABAMA | 2.4 | 4.7 | 2.1 | - | .8 | - | .8 | - | .6 | .6 | .6 |
| VIRGINIA | 2.4 | 5.9 | 1.1 | - | 1.1 | .2 | 1.6 | 10.3 | 1.5 | 1.5 | 1.5 |
| MISSOURI | 1.9 | .4 | 3.0 | - | 1.9 | - | 1.1 | 1.7 | .9 | .9 | .9 |
| COLORADO | 1.8 | 1.1 | 2.3 | - | 2.0 | 1.7 | 1.8 | - | 1.4 | 1.4 | 1.4 |
| ILLINOIS | 1.6 | .7 | .3 | - | 5.7 | 10.3 | 6.4 | .2 | 3.9 | 3.9 | 3.9 |
| TENNESSEE | 1.3 | .2 | 1.0 | 19.1 | 1.4 | .2 | 1.3 | - | .8 | .8 | .8 |
| NEVADA | 1.3 | .9 | 1.8 | .9 | .2 | 1.3 | 1.1 | - | .3 | .3 | .3 |
| MICHIGAN | 1.1 | .7 | 1.0 | - | 3.5 | - | 1.0 | - | 2.4 | 2.4 | 2.4 |
| CONNECTICUT | 1.1 | .7 | 1.3 | - | 1.8 | - | .5 | - | .7 | .7 | .7 |
| LOUISIANA | 1.0 | .5 | 1.4 | - | 1.1 | - | .5 | - | 2.2 | 2.2 | 2.2 |
| MINNESOTA | .7 | .2 | .9 | - | 1.7 | - | 1.5 | .4 | 1.3 | 1.3 | 1.3 |
| INDIANA | .6 | .4 | .7 | - | 1.7 | - | .3 | - | .6 | .6 | .6 |
| WISCONSIN | .6 | .3 | .4 | - | 2.6 | .3 | 1.5 | - | .8 | .8 | .8 |
| IDAHO | .5 | .1 | - | 12.1 | .1 | 1.8 | * | 1.0 | .5 | .5 | .5 |
| ARIZONA | .5 | .8 | .3 | - | .6 | .9 | .4 | - | .6 | .6 | .6 |
| GEORGIA | .5 | .6 | .3 | - | 1.6 | * | .9 | .3 | 1.3 | 1.3 | 1.3 |
| N CAROLINA | .4 | .3 | .1 | - | 2.6 | - | 1.4 | .5 | 1.0 | 1.0 | 1.0 |
| UTAH | .4 | .6 | .2 | - | 1.1 | .1 | .7 | - | .8 | .8 | .8 |
| HAWAII | .3 | .2 | .3 | - | .7 | - | .4 | - | 1.0 | 1.0 | 1.0 |
| ALASKA | .3 | .3 | .3 | - | .4 | - | .3 | - | 1.9 | 1.9 | 1.9 |
| OREGON | .2 | .2 | * | - | 1.0 | .1 | 1.5 | .7 | 1.9 | 1.9 | 1.9 |
| IOWA | .2 | .2 | * | - | 1.0 | - | .1 | - | .6 | .6 | .6 |
| RHODE ISL | .2 | .3 | .1 | - | .7 | - | .3 | - | .4 | .4 | .4 |
| OKLAHOMA | .2 | .3 | .1 | - | .6 | - | .9 | - | .8 | .8 | .8 |
| MISSISSIPPI | .2 | .5 | * | - | .4 | - | .7 | - | .7 | .7 | .7 |
| NEW HAMPSHIRE | .2 | .1 | .2 | - | .5 | - | * | - | .3 | .3 | .3 |
| KENTUCKY | .1 | .2 | * | - | .6 | .7 | .1 | .5 | .7 | .7 | .7 |
| N VIRGINIA | .1 | .2 | * | - | .4 | - | .1 | - | .8 | .8 | .8 |
| S CAROLINA | .1 | .1 | * | 2.0 | .3 | - | .2 | - | .4 | .4 | .4 |
| KANSAS | .1 | .1 | * | - | .8 | - | .1 | - | .6 | .6 | .6 |
| DELAWARE | .1 | * | .2 | - | .1 | - | * | - | .1 | .1 | .1 |
| MAINE | .1 | .1 | .1 | - | .1 | - | .4 | - | 1.1 | 1.1 | 1.1 |
| MONTANA | .1 | .2 | * | - | .2 | - | .2 | - | .6 | .6 | .6 |
| NEBRASKA | .1 | .1 | * | - | .4 | - | * | - | .6 | .6 | .6 |
| ARKANSAS | .1 | * | * | - | .3 | - | .2 | - | .9 | .9 | .9 |
| VERMONT | .1 | * | .1 | - | .2 | - | .3 | - | .3 | .3 | .3 |
| N DAKOTA | .1 | .1 | * | - | .2 | - | * | - | .4 | .4 | .4 |
| WYOMING | * | .1 | * | - | .2 | - | .1 | - | .5 | .5 | .5 |
| S DAKOTA | * | * | * | - | .2 | - | .1 | - | .5 | .5 | .5 |
| OUT AREAS | .1 | .1 | .1 | - | .3 | .2 | * | - | .5 | .5 | .5 |
| OFF ABROAD | .4 | 1.2 | .1 | - | * | .2 | * | 1.7 | - | - | - |

(1) FEDERAL INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE. (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION)

TABLE C-838. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT
TO EACH STATE, BY PERFORMER, FISCAL YEAR 1970

| STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS) | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | OTHER NONPROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NONPROFIT INSTI- TUTIONS | OTHER |
|--|-------|------------------------------|---------------------|---|---------------------------------|---|---|------|---|--|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY INDUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NONPROFIT INSTI- TUTIONS | | | | |
| TOTAL, ALL STATES | 100.0 | 24.9 | 52.5 | 2.9 | 9.6 | 5.0 | 2.9 | 1.7 | 2.9 | 1.7 | .6 |
| CALIFORNIA | 100.0 | 14.1 | 67.3 | .8 | 5.3 | 8.0 | 1.6 | 2.5 | 1.6 | 2.5 | .3 |
| NEW YORK | 100.0 | 6.3 | 64.0 | 4.2 | 13.5 | 4.8 | 5.8 | .3 | 5.8 | .3 | 1.1 |
| MARYLAND | 100.0 | 62.0 | 27.8 | - | 3.8 | 4.9 | .6 | .5 | .6 | .5 | .4 |
| FLORIDA | 100.0 | 39.0 | 56.7 | - | 3.8 | - | .3 | - | .3 | - | .2 |
| MASS | 100.0 | 15.3 | 45.3 | - | 19.8 | 8.1 | 5.8 | 5.2 | 5.8 | 5.2 | .5 |
| NEW JERSEY | 100.0 | 20.6 | 73.4 | - | 3.2 | 1.6 | .9 | - | .9 | - | .4 |
| TEXAS | 100.0 | 26.2 | 62.8 | - | 9.1 | 1.7 | .9 | .3 | .9 | .3 | .6 |
| PENN | 100.0 | 19.1 | 50.6 | 10.6 | 12.7 | 1.7 | 4.0 | .6 | 4.0 | .6 | .7 |
| DIST OF COL | 100.0 | 69.7 | 15.0 | - | 3.6 | .3 | 10.2 | - | 10.2 | - | 1.2 |
| OHIO | 100.0 | 44.8 | 37.3 | 1.0 | 9.0 | - | 7.2 | - | 7.2 | - | .6 |
| NEW MEXICO | 100.0 | 31.2 | 11.4 | 31.0 | 2.2 | 22.5 | 1.4 | .2 | 1.4 | .2 | .1 |
| WASHINGTON | 100.0 | 4.6 | 72.2 | .1 | 8.1 | .6 | 1.0 | 13.0 | 1.0 | 13.0 | .5 |
| ALABAMA | 100.0 | 49.4 | 46.0 | - | 3.4 | - | 1.0 | - | 1.0 | - | .1 |
| VIRGINIA | 100.0 | 61.9 | 23.6 | - | 4.6 | .3 | 2.0 | 7.2 | 2.0 | 7.2 | .4 |
| MISSOURI | 100.0 | 5.5 | 81.6 | - | 9.5 | - | 1.7 | 1.4 | 1.7 | 1.4 | .3 |
| COLORADO | 100.0 | 15.0 | 66.3 | - | 10.6 | 4.7 | 2.9 | - | 2.9 | - | .4 |
| ILLINOIS | 100.0 | 11.4 | 9.3 | - | 33.9 | 32.1 | 11.7 | .2 | 11.7 | .2 | 1.4 |
| TENNESSEE | 100.0 | 4.8 | 38.6 | 42.4 | 10.0 | 1.0 | 2.8 | - | 2.8 | - | .4 |
| NEVADA | 100.0 | 18.5 | 72.6 | 2.1 | 1.4 | 5.1 | .2 | - | .2 | - | .1 |
| MICHIGAN | 100.0 | 15.4 | 50.0 | - | 30.6 | - | 2.6 | - | 2.6 | - | 1.3 |
| CONNECTICUT | 100.0 | 17.4 | 64.7 | - | 16.1 | - | 1.3 | - | 1.3 | - | .4 |
| LOUISIANA | 100.0 | 13.0 | 73.7 | - | 10.4 | - | 1.6 | - | 1.6 | - | 1.3 |
| MINNESOTA | 100.0 | 7.3 | 62.0 | - | 22.8 | - | 6.0 | .9 | 6.0 | .9 | 1.1 |
| INDIANA | 100.0 | 15.3 | 56.0 | - | 26.8 | - | 1.3 | - | 1.3 | - | .6 |
| WISCONSIN | 100.0 | 10.7 | 34.6 | - | 43.4 | 3.0 | 7.5 | - | 7.5 | - | .8 |
| IDAHO | 100.0 | 6.2 | - | 69.4 | 2.4 | 17.9 | .2 | 3.2 | .2 | 3.2 | .6 |
| ARIZONA | 100.0 | 43.4 | 32.7 | - | 11.8 | 8.8 | 2.5 | - | 2.5 | - | .7 |
| GEORGIA | 100.0 | 30.4 | 29.9 | - | 31.3 | .5 | 5.3 | 1.0 | 5.3 | 1.0 | 1.6 |
| N CAROLINA | 100.0 | 20.3 | 8.8 | - | 58.1 | - | 9.6 | 1.8 | 9.6 | 1.8 | 1.3 |
| UTAH | 100.0 | 35.6 | 31.2 | - | 25.7 | 1.1 | 5.3 | - | 5.3 | - | 1.1 |
| HAWAII | 100.0 | 21.1 | 48.3 | - | 24.5 | - | 4.2 | - | 4.2 | - | 1.9 |
| ALASKA | 100.0 | 25.1 | 55.3 | - | 12.9 | - | 2.7 | - | 2.7 | - | 3.9 |
| OREGON | 100.0 | 24.6 | .4 | - | 44.0 | 1.8 | 18.9 | 5.4 | 18.9 | 5.4 | 4.9 |
| IOWA | 100.0 | 18.3 | 10.4 | - | 45.3 | 22.9 | 1.6 | - | 1.6 | - | 1.6 |
| RHODE ISL | 100.0 | 38.6 | 24.1 | - | 32.2 | - | 2.9 | - | 2.9 | - | 1.2 |
| OKLAHOMA | 100.0 | 41.3 | 15.4 | - | 27.9 | - | 13.0 | - | 13.0 | - | 2.4 |
| MISSISSIPPI | 100.0 | 59.8 | 5.8 | - | 21.6 | - | 10.6 | - | 10.6 | - | 2.2 |
| NEW HAMPSHIRE | 100.0 | 15.5 | 57.3 | - | 26.2 | - | .1 | - | .1 | - | .9 |
| KENTUCKY | 100.0 | 45.3 | 3.6 | - | 45.0 | - | 3.1 | - | 3.1 | - | 3.0 |
| W VIRGINIA | 100.0 | 29.6 | 3.9 | - | 27.9 | 26.4 | 2.9 | 5.7 | 2.9 | 5.7 | 3.5 |
| S CAROLINA | 100.0 | 15.4 | .9 | 49.3 | 26.6 | - | 5.9 | - | 5.9 | - | 1.9 |
| KANSAS | 100.0 | 15.0 | 15.1 | - | 65.1 | - | 1.8 | - | 1.8 | - | 3.0 |
| DELAWARE | 100.0 | 4.8 | 84.0 | - | 9.8 | - | .8 | - | .8 | - | .6 |
| MAINE | 100.0 | 26.4 | 41.2 | - | 10.8 | - | 14.6 | - | 14.6 | - | 7.1 |
| MONTANA | 100.0 | 50.0 | 16.6 | - | 21.9 | - | 6.6 | - | 6.6 | - | 4.8 |
| NEBRASKA | 100.0 | 21.8 | 23.5 | - | 48.5 | - | 1.1 | - | 1.1 | - | 5.1 |
| ARKANSAS | 100.0 | 11.0 | 22.8 | - | 49.0 | - | 9.0 | - | 9.0 | - | 8.2 |
| VERMONT | 100.0 | 5.9 | 45.4 | - | 36.9 | - | 8.6 | - | 8.6 | - | 3.2 |
| N DAKOTA | 100.0 | 53.8 | .1 | - | 28.7 | - | 13.8 | - | 13.8 | - | 3.8 |
| WYOMING | 100.0 | 59.0 | * | - | 37.2 | - | .2 | - | .2 | - | 3.6 |
| S DAKOTA | 100.0 | 28.6 | 14.3 | - | 41.8 | - | 7.5 | - | 7.5 | - | 7.7 |
| OUT AREAS | 100.0 | 25.4 | 38.4 | - | 24.8 | 8.1 | .9 | - | .9 | - | 2.4 |
| OFF ABROAD | 100.0 | 76.3 | 12.6 | - | .8 | 2.8 | .3 | 7.3 | .3 | 7.3 | - |

(1) FEDERAL INTRAMURAL ACTIVITIES COVER COSTS ASSOCIATED WITH THE ADMINISTRATION OF INTRAMURAL AND EXTRAMURAL PROGRAMS BY FEDERAL PERSONNEL AS WELL AS ACTUAL INTRAMURAL PERFORMANCE. (SEE TECHNICAL NOTES FOR FURTHER DESCRIPTION)

TABLE C-84. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY STATE AND AGENCY

FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| STATE (IN ORDER OF TOTAL FEDERAL R&D OBLIGATIONS) | TOTAL | DEPT. OF AGRICULTURE | DEPT. OF COMMERCE | DEPT. OF DEFENSE | DEPT. OF HEALTH, EDUCATION & WELFARE | DEPT. OF INTERIOR | DEPT. OF TRANSPORTATION | ATOMIC ENERGY COMMISSION | NATIONAL AERONAUTICS & SPACE ADMIN. | NATIONAL SCIENCE FOUNDATION | OFFICE OF ECONOMIC OPPORTUNITY |
|---|------------|----------------------|-------------------|------------------|--------------------------------------|-------------------|-------------------------|--------------------------|-------------------------------------|-----------------------------|--------------------------------|
| TOT. ALL ST. | 14,980,751 | 275,663 | 119,894 | 7,350,171 | 1,205,336 | 157,902 | 317,322 | 1,345,308 | 3,798,558 | 287,214 | 123,383 |
| CALIFORNIA | 3,871,053 | 18,296 | 5,411 | 2,220,160 | 135,729 | 14,287 | 18,685 | 284,123 | 1,129,095 | 35,921 | 9,846 |
| NEW YORK | 1,235,594 | 8,159 | 8,108 | 583,129 | 141,683 | 3,640 | 12,764 | 121,742 | 309,123 | 29,263 | 17,983 |
| MARYLAND | 1,063,359 | 41,927 | 36,838 | 481,315 | 240,050 | 11,838 | 7,163 | 7,907 | 225,796 | 6,799 | 3,726 |
| FLORIDA | 824,785 | 7,103 | 4,776 | 382,195 | 16,408 | 1,876 | 881 | 1,951 | 399,251 | 8,206 | 2,138 |
| MASS. | 760,920 | 1,111 | 4,268 | 512,464 | 83,519 | 3,809 | 9,425 | 20,931 | 99,562 | 19,785 | 6,046 |
| NEW JERSEY | 742,526 | 1,287 | 248 | 605,459 | 15,651 | 3,437 | 34,794 | 16,810 | 55,890 | 5,870 | 3,080 |
| TEXAS | 649,122 | 9,579 | 2,881 | 200,799 | 35,056 | 3,823 | 4,346 | 3,929 | 380,309 | 6,389 | 2,011 |
| PENN. | 538,761 | 9,054 | 349 | 295,203 | 62,087 | 11,213 | 3,068 | 94,486 | 45,418 | 12,515 | 5,368 |
| DIST OF COL. | 468,493 | 17,203 | 18,027 | 244,140 | 41,097 | 10,076 | 20,279 | 2,520 | 73,909 | 20,882 | 20,360 |
| OHIO | 457,342 | 4,383 | 288 | 249,945 | 31,887 | 1,800 | 44,388 | 15,303 | 99,180 | 7,302 | 2,866 |
| NEW MEXICO | 444,089 | 1,607 | 43 | 196,658 | 2,867 | 2,815 | 410 | 224,957 | 12,076 | 1,045 | 1,611 |
| WASHINGTON | 412,230 | 5,586 | 5,523 | 183,059 | 21,005 | 3,855 | 118,429 | 60,235 | 6,075 | 6,758 | 1,705 |
| ALABAMA | 357,221 | 3,210 | 75 | 81,519 | 10,660 | 1,453 | 1,292 | 78 | 258,503 | 331 | 100 |
| VIRGINIA | 352,685 | 3,778 | 2,180 | 202,158 | 11,789 | 4,093 | 10,957 | 2,466 | 111,992 | 1,888 | 1,384 |
| MISSOURI | 291,181 | 3,544 | 90 | 145,198 | 25,538 | 3,446 | 369 | 530 | 107,642 | 3,015 | 1,809 |
| COLORADO | 274,113 | 4,389 | 12,508 | 75,331 | 17,082 | 13,470 | 452 | 2,228 | 128,774 | 19,570 | 303 |
| ILLINOIS | 239,563 | 10,257 | 196 | 61,111 | 45,633 | 2,231 | 1,945 | 86,400 | 11,304 | 14,804 | 5,682 |
| TENNESSEE | 193,814 | 2,485 | 309 | 62,288 | 13,972 | 1,972 | 298 | 96,882 | 12,256 | 1,924 | 1,428 |
| NEVADA | 190,948 | 726 | 24 | 28,938 | 454 | 4,371 | 38 | 152,028 | 3,974 | 395 | - |
| MICHIGAN | 162,818 | 3,591 | 2,747 | 81,006 | 25,689 | 2,212 | 3,255 | 5,447 | 28,245 | 9,543 | 1,083 |
| CONNECTICUT | 160,027 | 1,380 | 787 | 101,945 | 15,662 | 392 | 1,240 | 6,309 | 27,150 | 5,063 | 99 |
| LOUISIANA | 146,488 | 11,556 | 484 | 2,750 | 10,999 | 625 | 979 | 277 | 114,454 | 3,204 | 1,160 |
| MINNESOTA | 109,270 | 5,037 | 208 | 39,900 | 22,093 | 3,692 | 566 | 3,492 | 29,989 | 2,808 | 1,485 |
| INDIANA | 91,905 | 2,914 | 52 | 59,664 | 10,865 | 592 | 1,641 | 3,274 | 6,855 | 5,842 | 206 |
| WISCONSIN | 87,143 | 8,772 | 502 | 12,938 | 21,607 | 1,662 | 241 | 4,553 | 21,824 | 5,500 | 9,544 |
| IDAHO | 75,008 | 3,534 | - | 241 | 298 | 1,287 | 21 | 68,144 | 900 | 555 | 28 |
| ARIZONA | 72,803 | 5,131 | 6 | 42,040 | 4,727 | 2,711 | 513 | 447 | 8,341 | 8,065 | 822 |
| GEORGIA | 72,265 | 10,972 | 595 | 25,266 | 21,852 | 1,065 | 823 | 1,038 | 4,415 | 4,224 | 2,015 |
| N CAROLINA | 62,908 | 5,509 | 2,271 | 11,653 | 30,019 | 2,842 | 723 | 1,792 | 2,433 | 5,961 | 1,705 |
| UTAH | 61,052 | 2,821 | 17 | 38,858 | 8,738 | 3,674 | 201 | 1,195 | 1,442 | 2,702 | 1,404 |
| HAWAII | 43,815 | 1,324 | 1,709 | 22,198 | 4,037 | 905 | 83 | 3,240 | 5,387 | 3,852 | 1,080 |
| ALASKA | 43,179 | 1,524 | 3,081 | 4,418 | 1,467 | 4,641 | 125 | 21,603 | 3,085 | 1,980 | 1,255 |
| OREGON | 33,848 | 5,026 | 804 | 3,025 | 15,464 | 4,533 | 216 | 1,266 | 607 | 351 | 2,556 |
| IOWA | 32,661 | 7,155 | 45 | 2,824 | 8,697 | 488 | 233 | 7,562 | 4,229 | 1,428 | - |
| RHODE ISL. | 29,911 | 466 | 309 | 19,843 | 4,121 | 427 | 176 | 694 | 450 | 3,213 | 212 |
| OKLAHOMA | 29,483 | 2,740 | 869 | 5,069 | 5,388 | 2,064 | 8,847 | 130 | 1,265 | 704 | 2,407 |
| MISSISSIPPI | 28,276 | 8,501 | 1,189 | 7,529 | 2,796 | 459 | 693 | 73 | 3,905 | 393 | 2,738 |
| NEW HAMPSHIRE | 27,268 | 1,129 | 19 | 14,359 | 3,074 | 345 | 2,799 | 344 | 3,736 | 1,463 | - |
| KENTUCKY | 20,413 | 3,448 | 150 | 5,991 | 5,798 | 1,225 | 397 | 618 | 842 | 1,062 | 882 |
| N VIRGINIA | 19,631 | 2,528 | 36 | 845 | 3,885 | 4,226 | 417 | 25 | 356 | 6,337 | 976 |
| S CAROLINA | 17,804 | 3,574 | 36 | 542 | 1,844 | 561 | 264 | 8,875 | 251 | 756 | 1,101 |
| KANSAS | 16,646 | 2,087 | 19 | 2,397 | 7,227 | 697 | 305 | 667 | 1,205 | 1,872 | 170 |
| DELAWARE | 16,299 | 536 | 64 | 919 | 207 | 238 | 71 | 30 | 13,872 | 362 | - |
| MAINE | 13,262 | 1,204 | 1,319 | 1,972 | 1,935 | 614 | 1,040 | 83 | 4,648 | 262 | 185 |
| MONTANA | 11,646 | 3,577 | 206 | 2,018 | 2,626 | 1,768 | 125 | 12 | 582 | 604 | 128 |
| NEBRASKA | 10,648 | 3,182 | 10 | 2,466 | 3,187 | 407 | 307 | 331 | 115 | 544 | 90 |
| ARKANSAS | 9,787 | 1,840 | 1 | 433 | 3,261 | 782 | 286 | 1,998 | 63 | 383 | 559 |
| VERMONT | 9,452 | 1,059 | - | 4,455 | 2,193 | 188 | 267 | 82 | 138 | 392 | 657 |
| N DAKOTA | 8,878 | 4,105 | 147 | 465 | 1,111 | 1,642 | 109 | 66 | - | 133 | 1,100 |
| WYOMING | 7,161 | 972 | 27 | 21 | 208 | 4,690 | 125 | 72 | 123 | 923 | - |
| S DAKOTA | 6,091 | 1,984 | 181 | 451 | 376 | 1,684 | 251 | 38 | 59 | 817 | 250 |
| OUT AREAS | 17,280 | 2,474 | 338 | 7,873 | 1,917 | 1,053 | - | 1,895 | 174 | 1,516 | 40 |
| OFF ABRDAD | 56,826 | 327 | 313 | 12,728 | 301 | - | - | 4,130 | 37,289 | 1,738 | - |

NOTE- THE OBLIGATIONS OF THE TEN MAJOR R&D SUPPORTING AGENCIES INCLUDED IN THIS TABLE REPRESENT MORE THAN 98 PERCENT OF TOTAL FEDERAL R&D OBLIGATIONS IN FY 1970.

TABLE C-84A. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT

OF EACH AGENCY, BY STATE, FISCAL YEAR 1970

| STATE (IN ORDER OF TOTAL FEDERAL OBLIGATIONS) | TOTAL | DEPT. OF AGRICULTURE | DEPT. OF COMMERCE | DEPT. OF DEFENSE | DEPT. OF HEALTH, EDUCATION & WELFARE | DEPT. OF INTERIOR | DEPT. OF TRANSPORTATION | ATOMIC ENERGY COMMISSION | NATIONAL AERONAUTICS & SPACE ADMIN. | NATIONAL SCIENCE FOUNDATION | OFFICE OF ECONOMIC OPPORTUNITY |
|---|-------|----------------------|-------------------|------------------|--------------------------------------|-------------------|-------------------------|--------------------------|-------------------------------------|-----------------------------|--------------------------------|
| TOT. ALL ST | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| CALIFORNIA | 25.8 | 6.6 | 4.5 | 30.2 | 11.2 | 9.0 | 5.9 | 21.1 | 29.7 | 12.5 | 8.0 |
| NEW YORK | 8.2 | 3.0 | 6.8 | 7.9 | 11.8 | 2.3 | 4.0 | 9.0 | 8.1 | 10.2 | 14.6 |
| MARYLAND | 7.1 | 15.2 | 30.7 | 6.5 | 19.9 | 7.5 | 2.3 | .6 | 5.9 | 2.4 | 3.0 |
| FLORIDA | 5.5 | 2.6 | 4.0 | 5.2 | 1.4 | 1.2 | .3 | .1 | 10.5 | 2.9 | 1.7 |
| MASS | 5.1 | .4 | 3.6 | 7.0 | 6.9 | 2.4 | 3.0 | 1.6 | 2.6 | 6.9 | 4.9 |
| NEW JERSEY | 5.0 | .5 | .2 | 8.2 | 1.3 | 2.2 | 11.0 | 1.2 | 1.5 | 2.0 | 2.5 |
| TEXAS | 4.3 | 3.5 | 2.4 | 2.7 | 2.9 | 2.4 | 1.4 | .3 | 10.0 | 2.2 | 1.6 |
| PENN | 3.6 | 3.3 | .3 | 4.0 | 5.2 | 7.1 | 1.0 | 7.0 | 1.2 | 4.4 | 4.4 |
| DIST OF COL | 3.1 | 6.2 | 15.0 | 3.3 | 3.4 | 6.4 | 2.2 | .2 | 1.9 | 7.3 | 16.5 |
| OHIO | 3.1 | 1.6 | .2 | 3.4 | 2.6 | 1.1 | 14.0 | 1.1 | 2.6 | 2.5 | 2.3 |
| NEW MEXICO | 3.0 | .6 | * | 2.7 | .2 | 1.8 | .1 | 16.7 | .3 | .4 | 1.3 |
| WASHINGTON | 2.8 | 2.0 | 4.6 | 2.5 | 1.7 | 2.4 | 37.3 | 4.5 | .2 | 2.4 | 1.4 |
| ALABAMA | 2.4 | 1.2 | .1 | 1.1 | .9 | .9 | .4 | * | 6.8 | .1 | .1 |
| VIRGINIA | 2.4 | 1.4 | 1.8 | 2.8 | 1.0 | 2.6 | 3.5 | .2 | 2.9 | .7 | 1.1 |
| MISSOURI | 1.9 | 1.3 | .1 | 2.0 | 2.1 | 2.2 | .1 | * | 2.8 | 1.0 | 1.5 |
| COLORADO | 1.8 | 1.6 | 10.4 | 1.0 | 1.4 | 8.5 | .1 | .2 | 3.4 | 6.8 | .2 |
| ILLINOIS | 1.6 | 3.7 | .2 | .8 | 3.8 | 1.4 | .6 | 6.4 | .3 | 5.2 | 4.6 |
| TENNESSEE | 1.3 | .9 | .3 | .8 | 1.2 | 1.2 | .1 | 7.2 | .3 | .7 | 1.2 |
| NEVADA | 1.3 | .3 | * | .4 | * | 2.8 | * | 11.3 | .1 | .1 | * |
| MICHIGAN | 1.1 | 1.3 | 2.3 | 1.1 | 2.1 | 1.4 | 1.0 | .4 | .7 | 3.3 | .9 |
| CONNECTICUT | 1.1 | .5 | .7 | 1.4 | 1.3 | .2 | .4 | .5 | .7 | 1.8 | .1 |
| LOUISIANA | 1.0 | 4.2 | .4 | * | .9 | .4 | .3 | * | 3.0 | 1.1 | .9 |
| MINNESOTA | .7 | 1.8 | .2 | .5 | 1.8 | 2.3 | .2 | .3 | .8 | 1.0 | 1.2 |
| INDIANA | .6 | 1.1 | * | .8 | .9 | .4 | .5 | .2 | .2 | 2.0 | .2 |
| WISCONSIN | .6 | 3.2 | .4 | .2 | 1.8 | 1.1 | .1 | .3 | .6 | 1.9 | 7.7 |
| IDAHO | .5 | 1.3 | - | * | * | .8 | * | 5.1 | * | .2 | * |
| ARIZONA | .5 | 1.9 | * | .6 | .4 | 1.7 | .2 | * | .2 | 2.8 | .7 |
| GEORGIA | .5 | 4.0 | .5 | .3 | 1.8 | .7 | .3 | .1 | .1 | 1.5 | 1.6 |
| N CAROLINA | .4 | 2.0 | 1.1 | .2 | 2.5 | 1.8 | .2 | .1 | .1 | 2.1 | 1.4 |
| UTAH | .4 | 1.0 | * | .5 | .7 | 2.3 | .1 | .1 | * | .9 | 1.1 |
| HAWAII | .3 | .5 | 1.4 | .3 | .3 | .6 | * | .2 | .1 | 1.3 | .9 |
| ALASKA | .3 | .6 | 2.6 | .1 | .1 | 2.9 | * | 1.6 | .1 | .7 | 1.0 |
| OREGON | .2 | 1.8 | .7 | * | 1.3 | 2.9 | .1 | .1 | .1 | .1 | 2.1 |
| IOWA | .2 | 2.6 | * | * | .7 | .3 | .1 | .6 | .1 | .5 | * |
| RHODE ISL | .2 | .2 | .3 | .3 | .3 | .3 | .1 | .1 | * | 1.1 | .2 |
| OKLAHOMA | .2 | 1.0 | .7 | .1 | .4 | 1.3 | 2.8 | * | * | .2 | 2.0 |
| MISSISSIPPI | .2 | 3.1 | 1.0 | .1 | .2 | .3 | .2 | * | .1 | .1 | 2.2 |
| NEW HAMPSHIRE | .2 | .4 | * | .2 | .3 | .2 | .9 | * | .1 | .5 | * |
| KENTUCKY | .1 | 1.3 | .1 | .1 | .5 | .8 | .1 | * | * | .4 | .7 |
| N VIRGINIA | .1 | .9 | * | * | .3 | 2.7 | .1 | * | * | 2.2 | .8 |
| S CAROLINA | .1 | 1.3 | * | * | .2 | .4 | .1 | .7 | * | .3 | .9 |
| KANSAS | .1 | .8 | * | * | .6 | .4 | .1 | * | * | .7 | .1 |
| DELAWARE | .1 | .2 | .1 | * | .2 | .2 | .1 | * | .4 | .1 | * |
| MAINE | .1 | .4 | 1.1 | * | .4 | .4 | .3 | * | .1 | .1 | .1 |
| MONTANA | .1 | 1.3 | .2 | * | .2 | 1.1 | * | * | * | .2 | .1 |
| NEBRASKA | .1 | 1.2 | * | * | .3 | .3 | .1 | * | * | .2 | .1 |
| ARKANSAS | .1 | .7 | .2 | * | .3 | .5 | .1 | .1 | * | .1 | .5 |
| VERMONT | .1 | .4 | * | .1 | .2 | .1 | .1 | .1 | * | .1 | .5 |
| N DAKOTA | .1 | 1.5 | .1 | .1 | .2 | 1.0 | * | * | * | * | .9 |
| WYOMING | * | .4 | * | * | * | 3.0 | * | * | * | .3 | * |
| S DAKOTA | * | .7 | .2 | * | * | 1.1 | .1 | * | * | .3 | .2 |
| OUT AREAS | .1 | .0 | .3 | .1 | .2 | .7 | - | .1 | * | .5 | * |
| OFF ABROAD | .4 | .1 | .3 | .2 | * | - | - | .3 | 1.0 | .6 | - |

TABLE C-848. PERCENT DISTRIBUTION OF FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT

TO EACH STATE, BY AGENCY, FISCAL YEAR 1970

| STATE (IN ORDER OF TOTAL FEDERAL OBLIGATIONS) | TOTAL | DEPT. OF AGRICULTURE | DEPT. OF COMMERCE | DEPT. OF DEFENSE | DEPT. OF HEALTH, EDUCATION & WELFARE | DEPT. OF INTERIOR | DEPT. OF TRANSPORTATION | ATOMIC ENERGY COMMISSION | NATIONAL AERONAUTICS & SPACE ADMIN. | NATIONAL SCIENCE FOUNDATION | OFFICE OF ECONOMIC OPPORTUNITY |
|---|-------|----------------------|-------------------|------------------|--------------------------------------|-------------------|-------------------------|--------------------------|-------------------------------------|-----------------------------|--------------------------------|
| TOT, ALL ST | 100.0 | 1.8 | .8 | 49.1 | 8.0 | 1.1 | 2.1 | 9.0 | 25.4 | 1.9 | .8 |
| CALIFORNIA | 100.0 | .5 | .1 | 57.4 | 3.5 | .4 | .5 | 7.3 | 29.2 | .9 | 3.2 |
| NEW YORK | 100.0 | .7 | .7 | 47.2 | 11.5 | .3 | 1.0 | 9.9 | 25.0 | 2.4 | 10.0 |
| MARYLAND | 100.0 | 3.9 | 3.5 | 45.3 | 22.6 | 1.1 | .7 | .7 | 21.2 | .6 | 11.6 |
| FLORIDA | 100.0 | .5 | .6 | 46.3 | 2.0 | .2 | .1 | .2 | 48.4 | 1.7 | 15.0 |
| MASS | 100.0 | .1 | .6 | 67.3 | 11.0 | .5 | 1.2 | 2.8 | 13.1 | 2.6 | 16.2 |
| NEW JERSEY | 100.0 | .2 | * | 81.5 | 2.1 | .5 | 4.7 | 2.3 | 7.5 | .8 | 16.6 |
| TEXAS | 100.0 | 1.5 | .4 | 30.9 | 5.4 | .6 | .7 | .6 | 58.6 | 1.0 | 19.0 |
| PENN | 100.0 | 1.7 | .1 | 54.8 | 11.5 | 2.1 | .6 | 17.5 | 8.4 | 2.3 | 22.9 |
| DIST OF COL | 100.0 | 3.7 | 3.8 | 52.1 | 8.8 | 2.2 | 4.3 | .5 | 15.8 | 4.5 | 26.3 |
| OHIO | 100.0 | 1.0 | .1 | 54.7 | 7.0 | .4 | 9.7 | 3.3 | 21.7 | 1.6 | 27.0 |
| NEW MEXICO | 100.0 | .4 | * | 44.3 | .6 | .6 | .1 | 50.7 | 2.7 | .2 | 27.8 |
| WASHINGTON | 100.0 | 1.4 | 1.3 | 44.4 | 5.1 | .9 | 28.7 | 14.6 | 1.5 | 1.6 | 29.9 |
| ALABAMA | 100.0 | .9 | * | 22.8 | 3.0 | .4 | .4 | * | 72.4 | .1 | 34.5 |
| VIRGINIA | 100.0 | 1.1 | .6 | 57.3 | 3.3 | 1.2 | 3.1 | .7 | 31.8 | .5 | 35.0 |
| MISSOURI | 100.0 | 1.2 | * | 49.9 | 8.8 | 1.2 | .1 | .2 | 37.0 | 1.7 | 42.4 |
| COLORADO | 100.0 | 1.6 | 4.6 | 27.5 | 6.2 | 4.9 | .2 | .8 | 47.0 | 7.1 | 45.0 |
| ILLINOIS | 100.0 | 4.3 | .1 | 25.5 | 19.0 | .9 | .8 | 36.1 | 4.7 | 6.2 | 51.5 |
| TENNESSEE | 100.0 | 1.3 | .2 | 32.1 | 7.2 | 1.0 | .2 | 50.0 | 6.3 | 1.0 | 63.7 |
| NEVADA | 100.0 | .4 | * | 15.2 | .2 | 2.3 | * | 79.6 | 2.1 | .2 | 64.6 |
| MICHIGAN | 100.0 | 2.2 | 1.7 | 49.8 | 15.8 | 1.4 | 2.0 | 3.3 | 17.3 | 5.9 | 75.8 |
| CONNECTICUT | 100.0 | .9 | .5 | 63.7 | 9.8 | .2 | .8 | 3.9 | 17.0 | 3.2 | 77.1 |
| LOUISIANA | 100.0 | 7.9 | .3 | 1.9 | 7.5 | .4 | .7 | .2 | 78.1 | 2.2 | 84.2 |
| MINNESOTA | 100.0 | 4.6 | .2 | 36.5 | 20.2 | 3.4 | .5 | 3.2 | 27.4 | 2.6 | 112.9 |
| INDIANA | 100.0 | 3.2 | .1 | 64.9 | 11.8 | .6 | 1.8 | 3.6 | 7.5 | 6.4 | 134.3 |
| WISCONSIN | 100.0 | 10.1 | .6 | 14.8 | 24.8 | 1.9 | .3 | 5.2 | 25.0 | 6.3 | 141.6 |
| IDAHO | 100.0 | 4.7 | - | .3 | .4 | 1.7 | * | 90.8 | 1.2 | .7 | 164.5 |
| ARIZONA | 100.0 | 7.0 | * | 57.7 | 6.5 | 3.7 | .7 | .6 | 11.5 | 11.1 | 169.5 |
| GEORGIA | 100.0 | 15.2 | .8 | 35.0 | 30.2 | 1.5 | 1.1 | 1.4 | 6.1 | 5.8 | 170.7 |
| N CAROLINA | 100.0 | 8.6 | 2.0 | 18.2 | 47.0 | 4.4 | 1.1 | 2.8 | 3.8 | 9.3 | 193.1 |
| UTAH | 100.0 | 4.6 | * | 63.6 | 14.3 | 6.0 | .3 | 2.0 | 2.4 | 4.4 | 202.1 |
| HAWAII | 100.0 | 3.0 | 3.9 | 50.7 | 9.2 | 2.1 | .2 | 7.4 | 12.3 | 8.8 | 281.6 |
| ALASKA | 100.0 | 3.5 | 7.1 | 10.2 | 3.4 | 10.7 | .3 | 50.0 | 7.1 | 4.6 | 285.7 |
| OREGON | 100.0 | 14.8 | 2.4 | 8.9 | 45.7 | 13.4 | .6 | 3.7 | 1.8 | 1.0 | 364.5 |
| IOWA | 100.0 | 21.9 | .1 | 8.6 | 26.6 | 1.5 | .7 | 23.2 | 12.9 | 4.4 | 377.8 |
| RHODE ISL | 100.0 | 1.6 | 1.0 | 66.3 | 13.8 | 1.4 | .6 | 2.3 | 1.5 | 10.7 | 412.5 |
| OKLAHOMA | 100.0 | 9.3 | 2.9 | 17.2 | 18.3 | 7.0 | 30.0 | .4 | 4.3 | 2.4 | 418.5 |
| MISSISSIPPI | 100.0 | 30.1 | 4.2 | 26.6 | 9.9 | 1.6 | 2.5 | .3 | 13.8 | 1.4 | 436.4 |
| NEW HAMPSHIRE | 100.0 | 4.1 | .1 | 52.7 | 11.3 | 1.3 | 10.3 | 1.3 | 13.7 | 5.4 | 452.5 |
| KENTUCKY | 100.0 | 16.9 | .7 | 29.3 | 28.4 | 6.0 | 1.9 | 3.0 | 4.1 | 5.2 | 604.4 |
| N VIRGINIA | 100.0 | 12.9 | .2 | 4.3 | 19.8 | 21.5 | 2.1 | .1 | 1.8 | 32.3 | 628.5 |
| S CAROLINA | 100.0 | 20.1 | .2 | 3.0 | 10.4 | 3.2 | 1.5 | 49.8 | 1.4 | 4.2 | 693.0 |
| KANSAS | 100.0 | 12.5 | .1 | 14.4 | 43.4 | 4.2 | 1.8 | 4.0 | 7.2 | 11.2 | 741.2 |
| DELAWARE | 100.0 | 3.3 | .4 | 5.6 | 1.3 | 1.5 | .4 | .2 | 85.1 | 2.2 | 757.0 |
| MAINE | 100.0 | 9.1 | 9.9 | 14.9 | 14.6 | 4.6 | 7.8 | .6 | 35.0 | 2.0 | 930.3 |
| MONTANA | 100.0 | 30.7 | 1.8 | 17.3 | 22.5 | 15.2 | 1.1 | .1 | 5.0 | 5.2 | 59.4 |
| NEBRASKA | 100.0 | 29.9 | .2 | 23.2 | 29.9 | 3.8 | 2.9 | 3.1 | 1.1 | 5.1 | 158.7 |
| ARKANSAS | 100.0 | 18.8 | 1.9 | 4.4 | 33.3 | 8.0 | 2.9 | 20.4 | .6 | 3.9 | 260.7 |
| VERMONT | 100.0 | 11.2 | .2 | 47.1 | 23.2 | 2.0 | 2.8 | .9 | 1.5 | 4.1 | 305.4 |
| N DAKOTA | 100.0 | 46.2 | 1.7 | 5.2 | 12.5 | 18.5 | 1.2 | .7 | - | 1.5 | 389.8 |
| WYOMING | 100.0 | 13.6 | .4 | .3 | 2.9 | 65.5 | 1.7 | 1.0 | 1.7 | 12.9 | 723.0 |
| S DAKOTA | 100.0 | 32.6 | 3.0 | 7.4 | 6.2 | 27.6 | 4.1 | .6 | 1.0 | 13.4 | 25.7 |
| OUT AREAS | 100.0 | 14.3 | 2.0 | 45.6 | 11.1 | 6.1 | - | 11.0 | 1.0 | 8.8 | 714.0 |
| OFF ABROAD | 100.0 | .6 | .6 | 22.4 | .5 | - | - | 7.3 | 65.6 | 3.1 | 217.1 |

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION,

STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | |
|--|------------|------------------------------|---------------------|--|---------------------------------|--|--|---|--------|
| | | | INDUSTRIAL FIRMS | FFRDGS ADMIN BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDGS ADMIN BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDGS ADMIN BY NON- PROFIT INSTI- TUTIONS | OTHER |
| TOTAL, ALL STATES | 14,980,751 | 3,729,333 | 7,862,204 | 430,403 | 1,438,415 | 748,391 | 435,596 | 247,771 | 88,638 |
| DEPARTMENT OF AGRICULTURE | 275,663 | 208,355 | 1,304 | - | 64,796 | - | 1,196 | - | 12 |
| DEPARTMENT OF COMMERCE | 119,894 | 88,063 | 17,713 | - | 4,487 | - | 1,169 | 3 | 8,459 |
| DEPARTMENT OF DEFENSE | 7,350,171 | 1,995,579 | 4,737,327 | 15,088 | 213,519 | 139,906 | 93,520 | 154,763 | 469 |
| DEPT. OF HEALTH, EDUC. & WELFARE | 1,205,336 | 246,583 | 43,653 | - | 646,606 | 8,031 | 184,371 | 27,735 | 48,357 |
| DEPARTMENT OF THE INTERIOR | 157,902 | 100,401 | 26,338 | 1,372 | 18,521 | - | 2,540 | 97 | 8,633 |
| DEPARTMENT OF TRANSPORTATION | 317,322 | 64,240 | 206,364 | - | 10,934 | - | 10,255 | 3,154 | 22,375 |
| ATOMIC ENERGY COMMISSON | 1,345,308 | 17,466 | 300,022 | 409,649 | 100,326 | 448,001 | 9,719 | 59,881 | 244 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 3,798,558 | 988,048 | 2,516,247 | 4,294 | 131,231 | 126,785 | 30,974 | 979 | 89 |
| NATIONAL SCIENCE FOUNDATION | 287,214 | 13,900 | 2,805 | - | 227,960 | 25,668 | 15,945 | 847 | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 123,383 | 6,698 | 10,431 | - | 20,035 | - | 85,907 | 312 | - |
| NEW ENGLAND | 1,000,840 | 164,395 | 480,985 | - | 198,048 | 61,842 | 49,877 | 39,486 | 6,207 |
| DEPARTMENT OF AGRICULTURE | 6,349 | 2,219 | 150 | - | 3,575 | - | 405 | - | - |
| DEPARTMENT OF COMMERCE | 6,723 | 2,981 | 2,460 | - | 727 | - | 74 | - | 481 |
| DEPARTMENT OF DEFENSE | 655,038 | 131,654 | 380,002 | - | 48,400 | 58,056 | 1,098 | 35,828 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 110,504 | 368 | 7,390 | - | 62,603 | 98 | 35,704 | 950 | 3,391 |
| DEPARTMENT OF THE INTERIOR | 5,775 | 1,747 | 1,978 | - | 1,387 | - | 77 | 97 | 489 |
| DEPARTMENT OF TRANSPORTATION | 14,947 | 2,742 | 7,064 | - | 1,009 | - | 60 | 2,248 | 1,824 |
| ATOMIC ENERGY COMMISSION | 28,443 | 325 | 8,804 | - | 14,936 | 3,476 | 902 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 135,684 | 22,218 | 71,399 | - | 36,430 | 212 | 5,425 | - | - |
| NATIONAL SCIENCE FOUNDATION | 30,178 | 141 | - | - | 27,822 | - | 1,830 | 363 | 22 |
| OFFICE OF ECONOMIC OPPORTUNITY | 7,199 | - | 1,738 | - | 1,159 | - | 4,302 | - | - |
| CONNECTICUT | 160,027 | 27,919 | 103,593 | - | 25,713 | - | 2,148 | - | 654 |
| DEPARTMENT OF AGRICULTURE | 1,380 | 683 | - | - | 397 | - | 300 | - | - |
| DEPARTMENT OF COMMERCE | 787 | 356 | 378 | - | 15 | - | - | - | 38 |
| DEPARTMENT OF DEFENSE | 101,945 | 25,144 | 74,987 | - | 1,716 | - | 98 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 15,662 | 23 | 98 | - | 13,950 | - | 1,103 | - | 488 |
| DEPARTMENT OF THE INTERIOR | 392 | 181 | 83 | - | 100 | - | 4 | - | 24 |
| DEPARTMENT OF TRANSPORTATION | 1,240 | 192 | 884 | - | 60 | - | - | - | 104 |
| ATOMIC ENERGY COMMISSION | 6,309 | 80 | 2,770 | - | 3,443 | - | 16 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 27,150 | 1,260 | 24,393 | - | 1,364 | - | 133 | - | - |
| NATIONAL SCIENCE FOUNDATION | 5,063 | - | - | - | 4,668 | - | 395 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 99 | - | - | - | - | - | 99 | - | - |
| MAINE | 13,262 | 3,504 | 5,465 | - | 1,426 | - | 1,930 | - | 937 |
| DEPARTMENT OF AGRICULTURE | 1,204 | 397 | - | - | 807 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 1,319 | 560 | 578 | - | 9 | - | - | - | 172 |
| DEPARTMENT OF DEFENSE | 1,972 | 1,790 | 155 | - | 27 | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 1,935 | - | 17 | - | 166 | - | 1,623 | - | 129 |
| DEPARTMENT OF THE INTERIOR | 614 | 231 | - | - | 154 | - | 10 | - | 219 |
| DEPARTMENT OF TRANSPORTATION | 1,040 | 310 | 313 | - | - | - | - | - | 417 |
| ATOMIC ENERGY COMMISSION | 83 | - | - | - | - | - | 83 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 4,648 | 216 | 4,402 | - | 30 | - | 29 | - | - |
| NATIONAL SCIENCE FOUNDATION | 262 | - | - | - | 233 | - | 185 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 185 | - | - | - | - | - | - | - | - |
| MASS | 760,920 | 116,626 | 344,814 | - | 150,649 | 61,842 | 43,786 | 39,486 | 3,717 |
| DEPARTMENT OF AGRICULTURE | 1,111 | 60 | 150 | - | 796 | - | 105 | - | - |
| DEPARTMENT OF COMMERCE | 4,268 | 2,065 | 1,431 | - | 509 | - | 74 | - | 189 |
| DEPARTMENT OF DEFENSE | 512,464 | 90,261 | 283,351 | - | 43,968 | 58,056 | 1,000 | 35,828 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 83,519 | 271 | 7,105 | - | 40,603 | 98 | 32,028 | 950 | 2,464 |
| DEPARTMENT OF THE INTERIOR | 3,809 | 998 | 1,895 | - | 683 | - | 63 | 97 | 73 |
| DEPARTMENT OF TRANSPORTATION | 9,425 | 2,163 | 3,136 | - | 849 | - | 60 | 2,248 | 969 |
| ATOMIC ENERGY COMMISSION | 20,931 | 226 | 5,738 | - | 10,688 | 3,476 | 803 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 99,562 | 20,527 | 40,270 | - | 33,242 | 212 | 5,203 | - | - |

NEW ENGLAND

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

CONNECTICUT

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

MAINE

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

MASS

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

NEW HAMPSHIRE

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

RHODE ISLAND

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

| | | | | | | | | |
|-----------|---------|---------|---|---------|--------|--------|--------|-------|
| 1,000,840 | 164,395 | 480,985 | - | 198,048 | 61,842 | 49,877 | 39,486 | 6,207 |
| 6,349 | 2,219 | 150 | - | 3,575 | - | 405 | - | - |
| 6,723 | 2,981 | 2,460 | - | 727 | - | 74 | - | 481 |
| 655,038 | 131,654 | 380,002 | - | 48,400 | 58,056 | 1,098 | 35,828 | - |
| 110,504 | 368 | 7,390 | - | 62,603 | 98 | 35,704 | 950 | 3,391 |
| 5,775 | 1,747 | 1,978 | - | 1,387 | - | 77 | 97 | 489 |
| 14,947 | 2,762 | 7,064 | - | 1,009 | - | 60 | 2,248 | 1,824 |
| 28,443 | 325 | 8,804 | - | 14,936 | 3,476 | 902 | - | - |
| 135,684 | 22,218 | 71,399 | - | 36,430 | 212 | 5,425 | - | - |
| 30,178 | 141 | - | - | 27,822 | - | 1,830 | 363 | 22 |
| 7,199 | - | 1,738 | - | 1,159 | - | 4,302 | - | - |
| 160,027 | 27,919 | 103,593 | - | 25,713 | - | 2,148 | - | 654 |
| 1,380 | 683 | - | - | 397 | - | 300 | - | - |
| 787 | 356 | 378 | - | 15 | - | - | - | 38 |
| 101,945 | 25,144 | 74,987 | - | 1,716 | - | 98 | - | - |
| 15,662 | 23 | 98 | - | 13,950 | - | 1,103 | - | 488 |
| 392 | 181 | 83 | - | 100 | - | 4 | - | 24 |
| 1,240 | 192 | 884 | - | 60 | - | - | - | 104 |
| 6,309 | 80 | 2,770 | - | 3,443 | - | 16 | - | - |
| 27,150 | 1,260 | 24,393 | - | 1,364 | - | 133 | - | - |
| 5,063 | - | - | - | 4,668 | - | 395 | - | - |
| 99 | - | - | - | - | - | 99 | - | - |
| 13,262 | 3,504 | 5,465 | - | 1,426 | - | 1,930 | - | 937 |
| 1,204 | 397 | - | - | 807 | - | - | - | - |
| 1,319 | 560 | 578 | - | 9 | - | - | - | 172 |
| 1,972 | 1,790 | 155 | - | 27 | - | - | - | - |
| 1,935 | - | 17 | - | 166 | - | 1,623 | - | 129 |
| 614 | 231 | - | - | 154 | - | 10 | - | 219 |
| 1,040 | 310 | 313 | - | - | - | - | - | 417 |
| 83 | - | - | - | - | - | 83 | - | - |
| 4,648 | 216 | 4,402 | - | 30 | - | - | - | - |
| 262 | - | - | - | 233 | - | 29 | - | - |
| 185 | - | - | - | - | - | 185 | - | - |
| 760,920 | 116,626 | 344,814 | - | 150,649 | 61,842 | 43,786 | 39,486 | 3,717 |
| 1,111 | 60 | 150 | - | 796 | - | 105 | - | - |
| 4,268 | 2,065 | 1,431 | - | 509 | - | 74 | - | 189 |
| 512,464 | 90,261 | 283,351 | - | 43,968 | 58,056 | 1,000 | 35,828 | - |
| 83,519 | 271 | 7,105 | - | 40,603 | 98 | 32,028 | 950 | 2,464 |
| 3,809 | 998 | 1,895 | - | 683 | - | 63 | 97 | 73 |
| 9,425 | 2,163 | 3,136 | - | 849 | - | 60 | 2,248 | 969 |
| 20,931 | 226 | 5,738 | - | 10,688 | 3,476 | 803 | - | - |
| 99,562 | 20,527 | 40,270 | - | 33,262 | 212 | 5,291 | - | - |
| 19,785 | 55 | - | - | 18,150 | - | 1,195 | 363 | 22 |
| 6,046 | - | 1,738 | - | 1,141 | - | 3,167 | - | - |
| 27,268 | 4,236 | 15,614 | - | 7,133 | - | 35 | - | 250 |
| 1,129 | 567 | - | - | 562 | - | - | - | - |
| 19 | - | - | - | - | - | - | - | 19 |
| 14,359 | 3,296 | 10,506 | - | 557 | - | - | - | - |
| 3,074 | - | - | - | 2,914 | - | 35 | - | 125 |
| 345 | 86 | - | - | 195 | - | - | - | 64 |
| 2,799 | 26 | 2,731 | - | - | - | - | - | 42 |
| 344 | - | 296 | - | 48 | - | - | - | - |
| 3,736 | 175 | 2,081 | - | 1,480 | - | - | - | - |
| 1,463 | 86 | - | - | 1,377 | - | - | - | - |
| - | - | - | - | - | - | - | - | - |
| 29,911 | 11,553 | 7,207 | - | 9,637 | - | 1,164 | - | 350 |
| 466 | - | - | - | 466 | - | - | - | - |
| 309 | - | 71 | - | 194 | - | - | - | 44 |
| 19,843 | 11,163 | 6,818 | - | 1,862 | - | - | - | - |
| 4,121 | 74 | 170 | - | 2,917 | - | 818 | - | 142 |
| 427 | 233 | - | - | 155 | - | - | - | 39 |
| 176 | 51 | - | - | - | - | - | - | 125 |
| 694 | - | - | - | 694 | - | - | - | - |
| 450 | 32 | 148 | - | 269 | - | 1 | - | - |
| 3,213 | - | - | - | 3,062 | - | 151 | - | - |
| 212 | - | - | - | 18 | - | 194 | - | - |

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN BY UNIVS & COLLEGES | FFRDCS ADMIN BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS | OTHER |
|--|-----------|------------------------|------------------|----------------------------------|-------------------------|----------------------------------|-------------------------------|----------------------------------|-------------------------------|----------------------------------|----------------------------------|-------------------------|----------------------------------|-------------------------------|---|--------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN BY UNIVS & COLLEGES | | | | | | | | |
| VERMONT | 9,452 | 557 | 4,292 | - | 3,490 | - | 814 | - | - | - | - | - | - | - | - | 299 |
| DEPARTMENT OF AGRICULTURE | 1,059 | 512 | - | - | 547 | - | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 21 | - | 2 | - | - | - | - | - | - | - | - | - | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 4,455 | - | 4,185 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 2,193 | - | - | - | 270 | - | - | - | - | - | - | - | - | - | - | 43 |
| DEPARTMENT OF THE INTERIOR | 188 | 18 | - | - | 2,053 | - | - | - | - | - | - | - | - | - | - | 70 |
| DEPARTMENT OF TRANSPORTATION | 267 | - | - | - | 100 | - | - | - | - | - | - | - | - | - | - | 167 |
| ATOMIC ENERGY COMMISSION | 82 | 19 | - | - | 63 | - | - | - | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 138 | 8 | 105 | - | 25 | - | - | - | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 392 | - | - | - | 332 | - | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 657 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| MA ATLANTIC | 2,516,881 | 333,636 | 1,608,755 | 109,009 | 258,715 | 79,589 | 99,884 | 6,881 | 20,412 | - | - | - | - | - | - | - |
| DEPARTMENT OF AGRICULTURE | 18,500 | 13,337 | 200 | - | 4,836 | - | 127 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 8,705 | 51 | 7,813 | - | 170 | - | 253 | - | - | - | - | - | - | - | - | 418 |
| DEPARTMENT OF DEFENSE | 1,483,791 | 255,611 | 1,164,472 | - | 25,851 | - | 21,103 | - | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 219,421 | 1,547 | 7,151 | - | 138,352 | - | 47,700 | - | - | - | - | - | - | - | - | 15,851 |
| DEPARTMENT OF THE INTERIOR | 18,290 | 11,302 | 3,647 | - | 2,110 | - | 588 | - | - | - | - | - | - | - | - | 643 |
| DEPARTMENT OF TRANSPORTATION | 50,626 | 28,460 | 13,973 | - | 1,385 | - | 3,332 | - | - | - | - | - | - | - | - | 3,476 |
| ATOMIC ENERGY COMMISSION | 233,038 | 3,308 | 36,027 | 109,009 | 22,870 | 60,796 | 1,004 | - | - | - | - | - | - | - | - | 24 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 410,431 | 20,020 | 372,418 | - | 14,803 | 100 | 3,090 | - | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 47,648 | - | 570 | - | 45,530 | - | 1,548 | - | - | - | - | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 26,431 | - | 2,484 | - | 2,808 | - | 21,139 | - | - | - | - | - | - | - | - | - |
| NEW JERSEY | 742,526 | 152,773 | 544,941 | - | 23,791 | 11,588 | 6,731 | - | 2,702 | - | - | - | - | - | - | - |
| DEPARTMENT OF AGRICULTURE | 1,287 | 452 | - | - | 835 | - | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 248 | 51 | 28 | - | 49 | - | - | - | - | - | - | - | - | - | - | 120 |
| DEPARTMENT OF DEFENSE | 605,459 | 119,989 | 482,363 | - | 3,066 | - | 41 | - | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 15,651 | - | 3,109 | - | 7,318 | - | 3,213 | - | - | - | - | - | - | - | - | 2,011 |
| DEPARTMENT OF THE INTERIOR | 3,437 | 1,199 | 1,978 | - | 144 | - | 25 | - | - | - | - | - | - | - | - | 91 |
| DEPARTMENT OF TRANSPORTATION | 34,794 | 26,996 | 7,054 | - | 264 | - | - | - | - | - | - | - | - | - | - | 480 |
| ATOMIC ENERGY COMMISSION | 16,810 | 1,068 | 1,143 | - | 2,951 | 11,588 | 60 | - | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 55,890 | 3,018 | 48,696 | - | 4,176 | - | 475 | - | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 5,870 | - | 570 | - | 4,825 | - | 2,917 | - | - | - | - | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 3,080 | - | - | - | 163 | - | - | - | - | - | - | - | - | - | - | - |
| NEW YORK | 1,235,594 | 77,786 | 791,155 | 52,157 | 166,690 | 58,909 | 71,695 | 3,484 | 13,718 | - | - | - | - | - | - | - |
| DEPARTMENT OF AGRICULTURE | 8,159 | 5,919 | 173 | - | 1,940 | - | 127 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 8,108 | - | 7,502 | - | 110 | - | 253 | - | - | - | - | - | - | - | - | 243 |
| DEPARTMENT OF DEFENSE | 583,129 | 50,259 | 488,691 | - | 15,089 | - | 19,963 | - | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 141,683 | 1,221 | 2,239 | - | 93,647 | 474 | 29,488 | 3,484 | - | - | - | - | - | - | - | 11,130 |
| DEPARTMENT OF THE INTERIOR | 3,640 | 1,844 | 294 | - | 1,073 | - | 65 | - | - | - | - | - | - | - | - | 364 |
| DEPARTMENT OF TRANSPORTATION | 12,764 | 1,418 | 5,784 | - | 452 | - | 3,153 | - | - | - | - | - | - | - | - | 1,957 |
| ATOMIC ENERGY COMMISSION | 121,742 | 2,240 | 1,977 | 52,157 | 15,453 | 49,208 | 682 | - | - | - | - | - | - | - | - | 24 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 309,123 | 14,885 | 284,435 | - | 29,263 | 100 | 2,331 | - | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 29,263 | - | - | - | 2,291 | - | 15,632 | - | - | - | - | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 17,983 | - | 60 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| PENNA | 538,761 | 103,077 | 272,659 | 56,852 | 68,234 | 9,092 | 21,458 | 3,397 | 3,992 | - | - | - | - | - | - | - |
| DEPARTMENT OF AGRICULTURE | 9,054 | 6,966 | 27 | - | 2,061 | - | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 349 | - | 283 | - | 11 | - | - | - | - | - | - | - | - | - | - | 55 |
| DEPARTMENT OF DEFENSE | 295,203 | 85,363 | 193,418 | - | 7,696 | - | 1,099 | - | - | - | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 62,087 | 326 | 1,803 | - | 37,387 | 7,627 | 14,999 | 3,397 | 2,710 | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR | 11,213 | 8,259 | 1,375 | - | 893 | - | 498 | - | - | - | - | - | - | - | - | 1,039 |
| DEPARTMENT OF TRANSPORTATION | 3,068 | 46 | 1,135 | - | 669 | - | 179 | - | - | - | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION | 94,486 | - | 32,907 | 56,852 | 4,466 | - | 261 | - | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 45,418 | 2,117 | 39,287 | - | 3,255 | - | 759 | - | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 12,515 | - | - | - | 11,442 | - | 1,073 | - | - | - | - | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 5,368 | - | 2,424 | - | 354 | - | 2,590 | - | - | - | - | - | - | - | - | - |

| | | | | | | | | | |
|------------------------------------|-----------|---------|-----------|---------|---------|--------|--------|-------|--------|
| DEPARTMENT OF AGRICULTURE | 18,500 | 13,337 | 200 | - | 4,836 | - | 127 | - | 418 |
| DEPARTMENT OF COMMERCE | 8,705 | 51 | 7,813 | - | 170 | - | 253 | - | - |
| DEPARTMENT OF DEFENSE | 1,483,791 | 255,611 | 1,164,472 | - | 25,851 | - | 21,103 | - | 15,851 |
| DEPT. OF HEALTH, EDUC. & WELFARE | 219,421 | 1,547 | 7,151 | - | 138,352 | 6,881 | 47,700 | - | 643 |
| DEPARTMENT OF THE INTERIOR | 18,290 | 11,302 | 3,647 | - | 2,110 | - | 588 | - | 3,476 |
| DEPARTMENT OF TRANSPORTATION | 50,626 | 28,460 | 13,973 | - | 1,385 | - | 3,332 | - | 24 |
| ATOMIC ENERGY COMMISSION | 233,038 | 3,308 | 36,027 | 109,009 | 22,870 | - | 1,004 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 410,431 | 20,020 | 372,418 | - | 14,803 | - | 3,090 | - | - |
| NATIONAL SCIENCE FOUNDATION | 47,648 | - | 570 | - | 45,530 | - | 1,548 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 26,431 | - | 2,484 | - | 2,808 | - | 21,139 | - | - |
| NEW JERSEY | 742,526 | 152,773 | 544,941 | - | 23,791 | 11,588 | 6,731 | - | 2,702 |
| DEPARTMENT OF AGRICULTURE | 1,287 | 452 | - | - | 835 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 248 | 51 | 28 | - | 49 | - | - | - | 120 |
| DEPARTMENT OF DEFENSE | 605,459 | 119,989 | 482,363 | - | 3,066 | - | 41 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 15,651 | - | 3,109 | - | 7,318 | - | 3,213 | - | 2,011 |
| DEPARTMENT OF THE INTERIOR | 3,437 | 1,199 | 1,978 | - | 144 | - | 25 | - | 91 |
| DEPARTMENT OF TRANSPORTATION | 34,794 | 26,996 | 7,754 | - | 264 | - | - | - | 480 |
| ATOMIC ENERGY COMMISSION | 16,810 | 1,068 | 1,143 | - | 2,951 | 11,588 | 60 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 55,890 | 3,018 | 48,696 | - | 4,176 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 5,870 | - | 570 | - | 4,825 | - | 475 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 3,080 | - | - | - | 163 | - | 2,917 | - | - |
| NEW YORK | 1,235,594 | 77,786 | 791,155 | 52,157 | 166,690 | 58,909 | 71,695 | 3,484 | 13,718 |
| DEPARTMENT OF AGRICULTURE | 8,159 | 5,919 | 173 | - | 1,940 | - | 127 | - | - |
| DEPARTMENT OF COMMERCE | 8,108 | - | 7,502 | - | 110 | - | 253 | - | 243 |
| DEPARTMENT OF DEFENSE | 583,129 | 50,259 | 488,691 | - | 15,089 | 9,127 | 19,963 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 141,683 | 1,221 | 2,239 | - | 93,647 | 474 | 29,488 | 3,484 | 11,130 |
| DEPARTMENT OF THE INTERIOR | 3,640 | 1,844 | 294 | - | 1,073 | - | 65 | - | 364 |
| DEPARTMENT OF TRANSPORTATION | 12,764 | 1,418 | 5,784 | - | 452 | - | 3,153 | - | 1,957 |
| ATOMIC ENERGY COMMISSION | 121,742 | 2,240 | 1,977 | 52,157 | 15,453 | 49,208 | 683 | - | 24 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 309,123 | 14,885 | 284,435 | - | 7,372 | 100 | 2,331 | - | - |
| NATIONAL SCIENCE FOUNDATION | 29,263 | - | 60 | - | 29,263 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 17,983 | - | - | - | 2,291 | - | 15,632 | - | - |
| PENN | 538,761 | 103,077 | 272,659 | 56,852 | 68,234 | 9,092 | 21,458 | 3,397 | 3,992 |
| DEPARTMENT OF AGRICULTURE | 9,054 | 6,966 | 27 | - | 2,061 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 349 | - | 283 | - | 11 | - | - | - | 55 |
| DEPARTMENT OF DEFENSE | 295,203 | 85,363 | 193,418 | - | 7,696 | 7,627 | 1,099 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 62,087 | 326 | 1,803 | - | 37,387 | 1,465 | 14,999 | 3,397 | 2,710 |
| DEPARTMENT OF THE INTERIOR | 11,213 | 8,259 | 1,375 | - | 893 | - | 498 | - | 188 |
| DEPARTMENT OF TRANSPORTATION | 3,068 | 46 | 1,135 | - | 669 | - | 179 | - | 1,039 |
| ATOMIC ENERGY COMMISSION | 94,486 | - | 32,907 | 56,852 | 4,466 | - | 261 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 45,418 | 2,117 | 39,287 | - | 3,255 | - | 759 | - | - |
| NATIONAL SCIENCE FOUNDATION | 12,515 | - | 2,424 | - | 11,442 | - | 1,073 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 5,368 | - | - | - | 354 | - | 2,590 | - | - |
| E N CENTRAL | 1,038,771 | 280,697 | 355,675 | 4,777 | 235,017 | 79,511 | 72,907 | 473 | 9,714 |
| DEPARTMENT OF AGRICULTURE | 29,917 | 21,034 | 208 | - | 8,494 | - | 176 | - | 5 |
| DEPARTMENT OF COMMERCE | 3,785 | 2,799 | 111 | - | 419 | - | 115 | - | 341 |
| DEPARTMENT OF DEFENSE | 464,664 | 172,138 | 228,602 | - | 38,606 | 1,379 | 23,939 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 135,681 | 3,145 | 4,792 | - | 99,142 | 1,298 | 21,646 | 473 | 5,185 |
| DEPARTMENT OF THE INTERIOR | 8,497 | 2,838 | 1,836 | - | 1,733 | - | 1,363 | - | 727 |
| DEPARTMENT OF TRANSPORTATION | 51,470 | 207 | 43,648 | - | 3,808 | - | 366 | - | 3,441 |
| ATOMIC ENERGY COMMISSION | 114,977 | 441 | 6,746 | 4,777 | 22,024 | 76,699 | 4,290 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 167,408 | 78,095 | 69,373 | - | 15,268 | 135 | 4,537 | - | - |
| NATIONAL SCIENCE FOUNDATION | 42,991 | - | 98 | - | 40,107 | - | 2,771 | - | 15 |
| OFFICE OF ECONOMIC OPPORTUNITY | 19,381 | - | 261 | - | 5,416 | - | 13,704 | - | - |
| ILLINOIS | 239,563 | 27,253 | 22,221 | - | 81,289 | 76,933 | 27,936 | 473 | 3,458 |
| DEPARTMENT OF AGRICULTURE | 10,257 | 8,561 | - | - | 1,661 | - | 30 | - | 5 |
| DEPARTMENT OF COMMERCE | 196 | - | - | - | 158 | - | 2 | - | 36 |
| DEPARTMENT OF DEFENSE | 61,111 | 16,189 | 16,929 | - | 18,605 | 99 | 9,289 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 45,633 | 431 | 1,569 | - | 31,326 | - | 9,358 | 473 | 2,476 |
| DEPARTMENT OF THE INTERIOR | 2,231 | 518 | - | - | 477 | - | 1,103 | - | 133 |
| DEPARTMENT OF TRANSPORTATION | 1,945 | 25 | 577 | - | 550 | - | - | - | 793 |
| ATOMIC ENERGY COMMISSION | 86,400 | 142 | 445 | - | 8,997 | 76,699 | 117 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 11,304 | 1,387 | 2,342 | - | 4,833 | 135 | 2,607 | - | - |
| NATIONAL SCIENCE FOUNDATION | 14,804 | - | 98 | - | 14,551 | - | 140 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 5,682 | - | 261 | - | 131 | - | 5,290 | - | 15 |

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION, STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | OTHER |
|--|---------|------------------------|------------------|----------------------------------|-------------------------|---|-------------------------------|---|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN BY UNIVERSITIES & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS | |
| INDIANA | 91,905 | 14,716 | 51,508 | - | 24,666 | - | 1,154 | - | 561 |
| DEPARTMENT OF AGRICULTURE | 2,914 | 1,202 | 8 | - | 1,704 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 52 | - | 19 | - | 14 | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 59,664 | 10,056 | 47,497 | - | 1,845 | - | 266 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 10,865 | 12 | 293 | - | 9,694 | - | 556 | - | 310 |
| DEPARTMENT OF THE INTERIOR | 592 | 273 | - | - | 235 | - | 84 | - | - |
| DEPARTMENT OF TRANSPORTATION | 1,641 | - | 632 | - | 753 | - | 24 | - | 232 |
| ATOMIC ENERGY COMMISSION | 3,274 | - | - | - | 3,274 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 6,855 | 2,473 | 3,059 | - | 1,323 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 5,842 | - | - | - | 5,824 | - | 18 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 206 | - | - | - | - | - | 206 | - | - |
| MICHIGAN | 162,818 | 25,111 | 81,355 | - | 49,894 | - | 4,295 | - | 2,163 |
| DEPARTMENT OF AGRICULTURE | 3,591 | 1,909 | - | - | 1,682 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 2,747 | 2,595 | 53 | - | 47 | - | - | - | 52 |
| DEPARTMENT OF DEFENSE | 81,006 | 18,549 | 57,257 | - | 5,146 | - | 54 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 25,689 | 265 | 1,165 | - | 20,941 | - | 2,386 | - | 932 |
| DEPARTMENT OF THE INTERIOR | 2,212 | 470 | 961 | - | 363 | - | 6 | - | 412 |
| DEPARTMENT OF TRANSPORTATION | 3,255 | - | 629 | - | 1,859 | - | - | - | 767 |
| ATOMIC ENERGY COMMISSION | 5,447 | - | - | - | 4,711 | - | 734 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 28,245 | 1,321 | 21,290 | - | 5,633 | - | 1 | - | - |
| NATIONAL SCIENCE FOUNDATION | 9,543 | - | - | - | 9,432 | - | 111 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,083 | - | - | - | 80 | - | 1,003 | - | - |
| OHIO | 457,342 | 204,982 | 170,399 | 4,777 | 41,328 | - | 33,009 | - | 2,847 |
| DEPARTMENT OF AGRICULTURE | 4,383 | 2,291 | 200 | - | 1,825 | - | 67 | - | - |
| DEPARTMENT OF COMMERCE | 288 | 102 | - | - | 5 | - | 113 | - | 68 |
| DEPARTMENT OF DEFENSE | 249,945 | 127,250 | 75,099 | - | 10,306 | - | 14,290 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 31,887 | 2,437 | 1,396 | - | 19,209 | - | 7,796 | - | 1,049 |
| DEPARTMENT OF THE INTERIOR | 1,800 | 621 | 509 | - | 413 | - | 155 | - | 102 |
| DEPARTMENT OF TRANSPORTATION | 44,388 | 182 | 41,810 | - | 426 | - | 342 | - | 1,628 |
| ATOMIC ENERGY COMMISSION | 15,302 | 197 | 4,912 | 4,777 | 2,009 | - | 3,408 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 99,180 | 71,902 | 23,473 | - | 1,876 | - | 1,929 | - | - |
| NATIONAL SCIENCE FOUNDATION | 7,302 | - | - | - | 4,800 | - | 2,502 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 2,866 | - | - | - | 459 | - | 2,407 | - | - |
| OHIO | 87,143 | 9,335 | 30,192 | - | 37,840 | 2,578 | 6,513 | - | 685 |
| DEPARTMENT OF AGRICULTURE | 8,772 | 7,071 | - | - | 1,622 | - | 79 | - | - |
| DEPARTMENT OF COMMERCE | 502 | 102 | 39 | - | 195 | - | - | - | 166 |
| DEPARTMENT OF DEFENSE | 12,938 | 94 | 8,820 | - | 2,704 | 1,280 | 40 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 21,607 | - | 369 | - | 17,972 | 1,298 | 1,550 | - | 418 |
| DEPARTMENT OF THE INTERIOR | 1,662 | 956 | 366 | - | 245 | - | 15 | - | 80 |
| DEPARTMENT OF TRANSPORTATION | 241 | - | - | - | 220 | - | - | - | 21 |
| ATOMIC ENERGY COMMISSION | 4,553 | 100 | 1,389 | - | 3,033 | - | 31 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 21,824 | 1,012 | 19,209 | - | 1,603 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 5,500 | - | - | - | 5,500 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 0 | - | - | - | - | - | - | - | - |

| | | | | | | | | | | |
|------------------------------------|---------|---------|---------|---|---|--------|---|--------|---|-------|
| DEPARTMENT OF AGRICULTURE | 2,914 | 1,202 | 8 | - | - | 1,704 | - | - | - | 501 |
| DEPARTMENT OF COMMERCE | 52 | - | 19 | - | - | 14 | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 59,664 | 10,056 | 47,497 | - | - | 1,845 | - | - | - | 19 |
| DEPARTMENT OF THE INTERIOR | 10,865 | 12 | 293 | - | - | 9,694 | - | 266 | - | 310 |
| DEPARTMENT OF TRANSPORTATION | 592 | 273 | - | - | - | 235 | - | 556 | - | - |
| ATOMIC ENERGY COMMISSION | 1,641 | - | 632 | - | - | 753 | - | 84 | - | 232 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 3,274 | - | - | - | - | 3,274 | - | 24 | - | - |
| NATIONAL SCIENCE FOUNDATION | 6,855 | 2,473 | 3,059 | - | - | 1,323 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 5,842 | - | - | - | - | 5,824 | - | 18 | - | - |
| 206 | - | - | - | - | - | - | - | 206 | - | - |
| MICHIGAN | 162,818 | 25,111 | 81,355 | - | - | 49,894 | - | 4,295 | - | 2,163 |
| DEPARTMENT OF AGRICULTURE | 3,591 | 1,909 | - | - | - | 1,682 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 2,747 | 2,595 | 53 | - | - | 47 | - | - | - | 52 |
| DEPT. OF HEALTH, EDUC., & WELFARE | 81,006 | 18,569 | 57,257 | - | - | 5,146 | - | 54 | - | 932 |
| DEPARTMENT OF THE INTERIOR | 25,689 | 265 | 1,165 | - | - | 20,941 | - | 2,386 | - | 412 |
| DEPARTMENT OF TRANSPORTATION | 2,212 | 470 | 961 | - | - | 363 | - | 6 | - | 767 |
| ATOMIC ENERGY COMMISSION | 3,255 | - | 629 | - | - | 1,859 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 5,447 | 2 | - | - | - | 4,711 | - | 734 | - | - |
| NATIONAL SCIENCE FOUNDATION | 28,245 | 1,321 | 21,290 | - | - | 5,633 | - | 1 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 9,543 | - | - | - | - | 9,432 | - | 111 | - | - |
| 1,083 | - | - | - | - | - | 80 | - | 1,003 | - | - |
| OHIO | 457,342 | 204,982 | 170,399 | - | - | 41,328 | - | - | - | 2,847 |
| DEPARTMENT OF AGRICULTURE | 4,383 | 2,291 | 200 | - | - | 1,825 | - | 67 | - | - |
| DEPARTMENT OF COMMERCE | 288 | 102 | - | - | - | 5 | - | 113 | - | 68 |
| DEPT. OF HEALTH, EDUC., & WELFARE | 249,945 | 127,250 | 98,099 | - | - | 10,306 | - | 14,290 | - | 1,049 |
| DEPARTMENT OF THE INTERIOR | 31,887 | 2,437 | 1,396 | - | - | 19,209 | - | 7,796 | - | 102 |
| DEPARTMENT OF TRANSPORTATION | 1,890 | 621 | 509 | - | - | 413 | - | 155 | - | 1,628 |
| ATOMIC ENERGY COMMISSION | 44,388 | 182 | 41,810 | - | - | 426 | - | 342 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 15,303 | 197 | 4,912 | - | - | 2,009 | - | 3,408 | - | - |
| NATIONAL SCIENCE FOUNDATION | 99,180 | 71,902 | 23,473 | - | - | 1,876 | - | 1,929 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 7,302 | - | - | - | - | 4,800 | - | 2,502 | - | - |
| 2,866 | - | - | - | - | - | 459 | - | 2,407 | - | - |
| WISCONSIN | 87,143 | 9,335 | 30,192 | - | - | 37,840 | - | 6,513 | - | 685 |
| DEPARTMENT OF AGRICULTURE | 8,772 | 7,071 | - | - | - | 1,622 | - | 79 | - | - |
| DEPARTMENT OF COMMERCE | 502 | 102 | 39 | - | - | 195 | - | - | - | 166 |
| DEPT. OF HEALTH, EDUC., & WELFARE | 12,938 | 94 | 8,820 | - | - | 2,704 | - | 40 | - | 418 |
| DEPARTMENT OF THE INTERIOR | 21,607 | 956 | 369 | - | - | 17,972 | - | 1,550 | - | 80 |
| DEPARTMENT OF TRANSPORTATION | 1,662 | - | 366 | - | - | 245 | - | 15 | - | 21 |
| ATOMIC ENERGY COMMISSION | 241 | - | - | - | - | 220 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 4,553 | 100 | 1,389 | - | - | 3,033 | - | 31 | - | - |
| NATIONAL SCIENCE FOUNDATION | 21,824 | 1,012 | 19,209 | - | - | 1,603 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 5,230 | - | - | - | - | 5,500 | - | - | - | - |
| 9,544 | - | - | - | - | - | 4,746 | - | 4,798 | - | - |
| MINNESOTA | 475,375 | 41,191 | 314,734 | - | - | 88,455 | - | 14,031 | - | 4,320 |
| DEPARTMENT OF AGRICULTURE | 27,094 | 17,817 | 266 | - | - | 8,987 | - | 24 | - | - |
| DEPARTMENT OF COMMERCE | 709 | 204 | 218 | - | - | 154 | - | - | - | 133 |
| DEPT. OF HEALTH, EDUC., & WELFARE | 193,701 | 5,307 | 179,640 | - | - | 8,093 | - | 661 | - | 2,137 |
| DEPARTMENT OF THE INTERIOR | 68,229 | 1,949 | 591 | - | - | 49,741 | - | 8,643 | - | 762 |
| DEPARTMENT OF TRANSPORTATION | 12,056 | 7,964 | 1,224 | - | - | 2,100 | - | 6 | - | 1,288 |
| ATOMIC ENERGY COMMISSION | 2,140 | - | 473 | - | - | 320 | - | 59 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 12,686 | 20 | 2,099 | - | - | 3,010 | - | 81 | - | - |
| NATIONAL SCIENCE FOUNDATION | 143,239 | 7,930 | 130,202 | - | - | 5,107 | - | 314 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 10,617 | - | - | - | - | 10,303 | - | 4,243 | - | - |
| 4,904 | - | - | 21 | - | - | 640 | - | - | - | - |
| IOWA | 32,661 | 5,976 | 3,381 | - | - | 14,781 | - | 528 | - | 519 |
| DEPARTMENT OF AGRICULTURE | 7,155 | 5,330 | - | - | - | 1,825 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 45 | - | - | - | - | 26 | - | - | - | 19 |
| DEPT. OF HEALTH, EDUC., & WELFARE | 2,824 | 225 | 1,286 | - | - | 1,287 | - | 26 | - | 414 |
| DEPARTMENT OF THE INTERIOR | 8,697 | - | - | - | - | 7,781 | - | 502 | - | 3 |
| DEPARTMENT OF TRANSPORTATION | 488 | 227 | - | - | - | 258 | - | - | - | 83 |
| ATOMIC ENERGY COMMISSION | 233 | - | - | - | - | 150 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 7,562 | - | - | - | - | 86 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 4,229 | 194 | 2,095 | - | - | 1,940 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,428 | - | - | - | - | 1,428 | - | - | - | - |
| 16,646 | - | - | - | - | - | - | - | - | - | - |
| KANSAS | 16,646 | 2,495 | 2,512 | - | - | 10,844 | - | 303 | - | 492 |
| DEPARTMENT OF AGRICULTURE | 2,087 | 1,010 | - | - | - | 1,077 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 19 | - | - | - | - | - | - | - | - | 19 |
| DEPT. OF HEALTH, EDUC., & WELFARE | 2,397 | 45 | 1,716 | - | - | 636 | - | - | - | 267 |
| DEPARTMENT OF THE INTERIOR | 7,227 | 913 | 72 | - | - | 5,672 | - | 303 | - | 102 |
| DEPARTMENT OF TRANSPORTATION | 697 | 414 | - | - | - | 181 | - | - | - | 104 |
| ATOMIC ENERGY COMMISSION | 305 | - | 201 | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 667 | - | 523 | - | - | 667 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 1,205 | 113 | - | - | - | 569 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,872 | - | - | - | - | 1,872 | - | - | - | - |
| 1,170 | - | - | - | - | - | 170 | - | - | - | - |

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION,

STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | FFRDCS ADMIN BY NON-PROFIT INSTITUTIONS | OTHER |
|--|---------|------------------------|------------------|----------------------------------|-------------------------|---|-------------------------------|---|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FFRDCS ADMIN BY UNIVERSITIES & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | | |
| MINNESOTA | 109,270 | 7,988 | 67,755 | - | 24,866 | - | 6,518 | 958 | 1,185 |
| DEPARTMENT OF AGRICULTURE | 5,037 | 3,318 | 150 | - | 1,569 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 208 | - | 189 | - | - | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 39,900 | 26 | 37,675 | - | 2,164 | - | 35 | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 22,093 | 305 | 519 | - | 14,219 | - | 5,217 | 958 | 875 |
| DEPARTMENT OF THE INTERIOR | 3,692 | 2,866 | 105 | - | 592 | - | 6 | - | 123 |
| DEPARTMENT OF TRANSPORTATION | 566 | - | 228 | - | 170 | - | - | - | 168 |
| ATOMIC ENERGY COMMISSION | 3,492 | - | 1,834 | - | 1,658 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 29,989 | 1,473 | 27,040 | - | 1,476 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 2,608 | - | - | - | 2,808 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,485 | - | 15 | - | 210 | - | 1,260 | - | - |
| MISSOURI | 291,181 | 15,900 | 237,707 | - | 27,703 | - | 4,885 | 4,210 | 776 |
| DEPARTMENT OF AGRICULTURE | 3,544 | 1,783 | 89 | - | 1,648 | - | 24 | - | - |
| DEPARTMENT OF COMMERCE | 90 | 51 | 20 | - | - | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 145,198 | 4,799 | 136,411 | - | 3,388 | - | 600 | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 25,538 | 731 | - | - | 17,816 | - | 2,496 | 4,210 | 285 |
| DEPARTMENT OF THE INTERIOR | 3,446 | 2,393 | 688 | - | 164 | - | - | - | 201 |
| DEPARTMENT OF TRANSPORTATION | 369 | - | 39 | - | - | - | 59 | - | 271 |
| ATOMIC ENERGY COMMISSION | 530 | - | - | - | 449 | - | 81 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 107,642 | 6,143 | 100,454 | - | 1,045 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 3,015 | - | 6 | - | 2,933 | - | 82 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,809 | - | - | - | 260 | - | 1,543 | - | - |
| NEBRASKA | 10,648 | 2,317 | 2,500 | - | 5,167 | - | 121 | - | 543 |
| DEPARTMENT OF AGRICULTURE | 3,182 | 1,994 | - | - | 1,188 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 19 | - | - | - | - | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 2,466 | 180 | 2,145 | - | 141 | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 3,187 | - | - | - | 3,068 | - | 31 | - | 88 |
| DEPARTMENT OF THE INTERIOR | 407 | 138 | - | - | 140 | - | - | - | 129 |
| DEPARTMENT OF TRANSPORTATION | 307 | - | - | - | - | - | - | - | 307 |
| ATOMIC ENERGY COMMISSION | 331 | - | 265 | - | 66 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 115 | 5 | 90 | - | 20 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 544 | - | - | - | 544 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 90 | - | - | - | - | - | 90 | - | - |
| N DAKOTA | 8,878 | 4,772 | 5 | - | 2,545 | - | 1,221 | - | 335 |
| DEPARTMENT OF AGRICULTURE | 4,105 | 3,318 | - | - | 787 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 147 | - | - | - | 128 | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 465 | - | - | - | 465 | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 1,111 | - | - | - | 914 | - | 89 | - | 108 |
| DEPARTMENT OF THE INTERIOR | 1,642 | 1,434 | - | - | 104 | - | - | - | 104 |
| DEPARTMENT OF TRANSPORTATION | 109 | - | 5 | - | - | - | - | - | 104 |
| ATOMIC ENERGY COMMISSION | 66 | 20 | - | - | 46 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | - | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 133 | - | - | - | 101 | - | 32 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,100 | - | - | - | - | - | 1,100 | - | - |
| S DAKOTA | 6,091 | 1,743 | 874 | - | 2,549 | - | 455 | - | 470 |
| DEPARTMENT OF AGRICULTURE | 1,984 | 1,064 | 27 | - | 893 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 181 | 153 | 9 | - | - | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 451 | 32 | 407 | - | 12 | - | - | - | - |
| DEPT. OF HEALTH, EDUC., & WELFARE | 376 | - | - | - | 271 | - | 5 | - | 100 |
| DEPARTMENT OF THE INTERIOR | 1,684 | 492 | 431 | - | 661 | - | - | - | 100 |
| DEPARTMENT OF TRANSPORTATION | 251 | - | - | - | - | - | - | - | 251 |
| ATOMIC ENERGY COMMISSION | 38 | - | - | - | 38 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 59 | 2 | - | - | 57 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 817 | - | - | - | 617 | - | 200 | - | - |

| | | | | | | | | | |
|------------------------------------|-----------|-----------|-----------|-------|---------|--------|--------|--------|--------|
| DEPARTMENT OF DEFENSE | 145,198 | 4,799 | 1,564,411 | - | 3,565 | - | 2,496 | 4,210 | 285 |
| DEPT. OF HEALTH, EDUC. & WELFARE | 25,538 | 731 | 688 | - | 17,816 | - | - | - | 201 |
| DEPARTMENT OF THE INTERIOR | 3,446 | 2,393 | 39 | - | 164 | - | 59 | - | 271 |
| DEPARTMENT OF TRANSPORTATION | 369 | - | - | - | - | - | 81 | - | - |
| ATOMIC ENERGY COMMISSION | 530 | - | - | - | 449 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 107,642 | 6,143 | 100,454 | - | 1,045 | - | 82 | - | - |
| NATIONAL SCIENCE FOUNDATION | 3,015 | - | - | - | 2,933 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,809 | - | 6 | - | 260 | - | 1,543 | - | - |
| NEBRASKA | 10,648 | 2,317 | 2,500 | - | 5,167 | - | 121 | - | 543 |
| DEPARTMENT OF AGRICULTURE | 3,182 | 1,994 | - | - | 1,188 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 19 | - | - | - | - | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 2,466 | 180 | 2,145 | - | 141 | - | - | - | 88 |
| DEPT. OF HEALTH, EDUC. & WELFARE | 3,187 | - | - | - | 3,068 | - | 31 | - | 129 |
| DEPARTMENT OF THE INTERIOR | 407 | 138 | - | - | 140 | - | - | - | 307 |
| DEPARTMENT OF TRANSPORTATION | 307 | - | - | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION | 331 | - | 265 | - | 66 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 115 | 5 | 90 | - | 20 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 544 | - | - | - | 544 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 90 | - | - | - | - | - | 90 | - | - |
| N DAKOTA | 8,878 | 4,772 | 5 | - | 2,545 | - | 1,221 | - | 335 |
| DEPARTMENT OF AGRICULTURE | 4,105 | 3,318 | - | - | 787 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 147 | - | - | - | 128 | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 465 | - | - | - | 465 | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 1,111 | - | - | - | 914 | - | 89 | - | 108 |
| DEPARTMENT OF THE INTERIOR | 1,642 | 1,434 | - | - | 104 | - | - | - | 104 |
| DEPARTMENT OF TRANSPORTATION | 109 | - | 5 | - | - | - | - | - | 104 |
| ATOMIC ENERGY COMMISSION | 66 | 20 | - | - | 46 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | - | - | - | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 133 | - | - | - | 101 | - | 32 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,100 | - | - | - | - | - | 1,100 | - | - |
| S DAKOTA | 6,091 | 1,743 | 874 | - | 2,549 | - | 455 | - | 470 |
| DEPARTMENT OF AGRICULTURE | 1,984 | 1,064 | 27 | - | 893 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 181 | 153 | 9 | - | - | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 451 | 32 | 407 | - | 12 | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 376 | - | - | - | 271 | - | 5 | - | 100 |
| DEPARTMENT OF THE INTERIOR | 1,684 | 492 | 431 | - | 661 | - | - | - | 100 |
| DEPARTMENT OF TRANSPORTATION | 251 | - | - | - | - | - | - | - | 251 |
| ATOMIC ENERGY COMMISSION | 38 | - | - | - | 38 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 59 | 2 | - | - | 57 | - | 200 | - | - |
| NATIONAL SCIENCE FOUNDATION | 817 | - | - | - | 617 | - | 250 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 250 | - | - | - | - | - | - | - | - |
| S ATLANTIC | 2,899,229 | 1,569,396 | 959,134 | 8,777 | 175,813 | 60,661 | 75,238 | 34,012 | 16,138 |
| DEPARTMENT OF AGRICULTURE | 93,130 | 81,506 | 333 | - | 11,221 | - | 70 | - | - |
| DEPARTMENT OF COMMERCE | 63,823 | 56,192 | 2,714 | - | 613 | - | 76 | - | 4,228 |
| DEPARTMENT OF DEFENSE | 1,349,033 | 753,186 | 481,023 | - | 22,176 | 49,420 | 13,200 | 30,028 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 367,151 | 229,366 | 19,986 | - | 86,648 | 989 | 19,821 | 2,924 | 7,417 |
| DEPARTMENT OF THE INTERIOR | 36,815 | 25,281 | 7,725 | - | 2,693 | - | 218 | - | 898 |
| DEPARTMENT OF TRANSPORTATION | 41,578 | 19,369 | 10,901 | - | 1,233 | - | 5,655 | 906 | 3,514 |
| ATOMIC ENERGY COMMISSION | 26,604 | 3,486 | 5,337 | 8,727 | 8,564 | - | 431 | - | 59 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 832,275 | 380,553 | 424,819 | 50 | 12,420 | 5,072 | 9,221 | 140 | - |
| NATIONAL SCIENCE FOUNDATION | 55,415 | 13,759 | 1,191 | - | 27,383 | 5,180 | 7,880 | - | 22 |
| OFFICE OF ECONOMIC OPPORTUNITY | 33,405 | 6,698 | 5,105 | - | 2,862 | - | 18,666 | 74 | - |
| DELAWARE | 16,299 | 780 | 13,699 | - | 1,593 | - | 131 | - | 96 |
| DEPARTMENT OF AGRICULTURE | 536 | 38 | - | - | 498 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 64 | - | - | - | 30 | - | - | - | 34 |
| DEPARTMENT OF DEFENSE | 919 | - | 430 | - | 409 | - | 80 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 207 | - | - | - | 155 | - | 51 | - | 1 |
| DEPARTMENT OF THE INTERIOR | 238 | 98 | - | - | 100 | - | - | - | 40 |
| DEPARTMENT OF TRANSPORTATION | 71 | - | 50 | - | - | - | - | - | 21 |
| ATOMIC ENERGY COMMISSION | 30 | - | - | - | 30 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 13,872 | 644 | 13,219 | - | 9 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 362 | - | - | - | 362 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | - | - | - | - | - | - | - | - | - |

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION,
STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970
(THOUSANDS OF DOLLARS)

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NON- PROFIT INSTI- TUTIONS | OTHER |
|--|-----------|------------------------------|---------------------|---------------------------------------|---------------------------------|--|--|-------|--|---|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | | | | |
| DIST OF COL | 468,493 | 326,455 | 70,214 | - | 16,945 | 1,532 | 47,920 | - | - | 5,427 | |
| DEPARTMENT OF AGRICULTURE | 17,203 | 17,097 | 36 | - | 70 | - | - | - | - | - | |
| DEPARTMENT OF COMMERCE | 18,027 | 14,139 | 679 | - | 22 | - | - | - | - | 3,187 | |
| DEPARTMENT OF DEFENSE | 244,140 | 188,058 | 45,067 | - | 3,033 | 1,532 | 6,450 | - | - | 1,202 | |
| DEPT. OF HEALTH, EDUC. & WELFARE | 41,097 | 17,940 | 1,131 | - | 8,923 | - | 11,901 | - | - | - | |
| DEPARTMENT OF THE INTERIOR | 10,076 | 9,079 | 650 | - | 170 | - | 177 | - | - | - | |
| DEPARTMENT OF TRANSPORTATION | 20,279 | 11,221 | 3,312 | - | 391 | - | 4,339 | - | - | 1,016 | |
| ATOMIC ENERGY COMMISSION | 2,520 | 1,969 | 2 | - | 240 | - | 309 | - | - | - | |
| NATIONAL AERONAUTICS & SPACE ADMIN | 73,909 | 46,895 | 17,292 | - | 1,940 | - | 7,782 | - | - | - | |
| NATIONAL SCIENCE FOUNDATION | 20,882 | 13,359 | 545 | - | 1,654 | - | 5,302 | - | - | 22 | |
| OFFICE OF ECONOMIC OPPORTUNITY | 20,360 | 6,698 | 1,500 | - | 502 | - | 11,660 | - | - | - | |
| FLORIDA | 824,785 | 321,497 | 467,791 | - | 31,106 | - | 2,399 | - | - | 1,992 | |
| DEPARTMENT OF AGRICULTURE | 7,103 | 5,683 | 107 | - | 1,298 | - | 15 | - | - | - | |
| DEPARTMENT OF COMMERCE | 4,776 | 4,122 | 216 | - | 187 | - | - | - | - | 251 | |
| DEPARTMENT OF DEFENSE | 382,195 | 167,170 | 209,647 | - | 5,350 | - | 28 | - | - | - | |
| DEPT. OF HEALTH, EDUC. & WELFARE | 16,408 | 456 | 1,174 | - | 12,063 | - | 1,298 | - | - | 1,417 | |
| DEPARTMENT OF THE INTERIOR | 1,876 | 1,229 | 67 | - | 439 | - | 5 | - | - | 136 | |
| DEPARTMENT OF TRANSPORTATION | 881 | 206 | 249 | - | 238 | - | - | - | - | 188 | |
| ATOMIC ENERGY COMMISSION | 1,951 | - | 38 | - | 1,913 | - | - | - | - | - | |
| NATIONAL AERONAUTICS & SPACE ADMIN | 399,251 | 142,631 | 255,510 | - | 1,110 | - | - | - | - | - | |
| NATIONAL SCIENCE FOUNDATION | 8,206 | - | 636 | - | 7,500 | - | 70 | - | - | - | |
| OFFICE OF ECONOMIC OPPORTUNITY | 2,138 | - | 147 | - | 1,008 | - | 983 | - | - | - | |
| GEORGIA | 72,265 | 21,943 | 21,635 | - | 22,603 | 339 | 3,843 | 720 | 1,182 | - | |
| DEPARTMENT OF AGRICULTURE | 10,972 | 8,826 | 101 | - | 2,035 | - | 10 | - | - | - | |
| DEPARTMENT OF COMMERCE | 595 | 407 | - | - | 84 | - | - | - | - | 104 | |
| DEPT. OF HEALTH, EDUC. & WELFARE | 25,266 | 977 | 19,056 | - | 4,360 | - | 873 | - | - | - | |
| DEPARTMENT OF THE INTERIOR | 21,852 | 10,440 | 15 | - | 9,266 | 339 | 537 | 720 | 535 | - | |
| DEPARTMENT OF TRANSPORTATION | 1,065 | 450 | - | - | 402 | - | 25 | - | - | 188 | |
| ATOMIC ENERGY COMMISSION | 823 | - | 200 | - | 268 | - | - | - | - | 355 | |
| NATIONAL AERONAUTICS & SPACE ADMIN | 1,038 | - | 8 | - | 977 | - | 53 | - | - | - | |
| NATIONAL SCIENCE FOUNDATION | 4,415 | 843 | 2,255 | - | 1,317 | - | - | - | - | - | |
| OFFICE OF ECONOMIC OPPORTUNITY | 4,224 | - | - | - | 3,864 | - | 360 | - | - | - | |
| | 2,015 | - | - | - | 30 | - | 1,985 | - | - | - | |
| MARYLAND | 1,063,359 | 659,019 | 295,838 | - | 40,071 | 52,449 | 6,233 | 5,540 | 4,209 | - | |
| DEPARTMENT OF AGRICULTURE | 41,927 | 41,040 | - | - | 887 | - | - | - | - | - | |
| DEPARTMENT OF COMMERCE | 36,838 | 35,585 | 1,005 | - | 58 | - | - | - | - | 190 | |
| DEPARTMENT OF DEFENSE | 481,315 | 275,875 | 147,579 | - | 3,613 | 47,588 | 1,260 | 5,400 | - | - | |
| DEPT. OF HEALTH, EDUC. & WELFARE | 240,050 | 196,532 | 13,590 | - | 22,051 | 650 | 3,948 | - | - | 3,279 | |
| DEPARTMENT OF THE INTERIOR | 11,838 | 7,025 | 4,575 | - | 173 | - | - | - | - | 65 | |
| DEPARTMENT OF TRANSPORTATION | 7,143 | 2,281 | - | - | - | - | - | - | - | - | |

| | | | | | | | | | | | |
|---|-----------|---------|---------|---|--------|---|--------|--------|---|--------|-------|
| NATIONAL AERONAUTICS & SPACE ADMINISTRATION | 73,909 | 46,895 | 17,292 | - | 1,940 | - | - | 7,782 | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 20,882 | 13,359 | 545 | - | 5,302 | - | - | 5,302 | - | - | 22 |
| OFFICE OF ECONOMIC OPPORTUNITY | 20,360 | 6,698 | 1,500 | - | 502 | - | - | 11,660 | - | - | - |
| FLORIDA | 824,785 | 321,497 | 467,791 | - | 31,106 | - | - | 2,399 | - | - | 1,992 |
| DEPARTMENT OF AGRICULTURE | 7,103 | 5,683 | 107 | - | 1,298 | - | - | 15 | - | - | - |
| DEPARTMENT OF COMMERCE | 4,776 | 4,122 | 216 | - | 187 | - | - | - | - | - | 251 |
| DEPARTMENT OF DEFENSE | 382,195 | 167,170 | 209,647 | - | 5,350 | - | - | 28 | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 16,408 | 456 | 1,174 | - | 12,063 | - | - | 1,298 | - | - | 1,417 |
| DEPARTMENT OF THE INTERIOR | 1,876 | 1,229 | 67 | - | 439 | - | - | 5 | - | - | 136 |
| DEPARTMENT OF TRANSPORTATION | 881 | 206 | 249 | - | 238 | - | - | - | - | - | 188 |
| ATOMIC ENERGY COMMISSION | 1,951 | - | 38 | - | 1,913 | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMINISTRATION | 399,251 | 142,631 | 255,510 | - | 1,110 | - | - | 70 | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 8,206 | - | 636 | - | 7,500 | - | - | 983 | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 2,138 | - | 147 | - | 1,008 | - | - | - | - | - | - |
| GEORGIA | 72,265 | 21,943 | 21,635 | - | 22,603 | - | 339 | 3,843 | - | 720 | 1,182 |
| DEPARTMENT OF AGRICULTURE | 10,972 | 8,826 | 101 | - | 2,035 | - | - | 10 | - | - | 104 |
| DEPARTMENT OF COMMERCE | 595 | 407 | - | - | 84 | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE | 25,266 | 977 | 19,056 | - | 4,360 | - | - | 873 | - | - | 535 |
| DEPT. OF HEALTH, EDUC. & WELFARE | 21,852 | 10,440 | 15 | - | 9,266 | - | 339 | 537 | - | 720 | 188 |
| DEPARTMENT OF THE INTERIOR | 1,065 | 450 | - | - | 402 | - | - | 25 | - | - | 355 |
| DEPARTMENT OF TRANSPORTATION | 823 | - | 200 | - | 268 | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION | 1,038 | - | 8 | - | 977 | - | - | 53 | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMINISTRATION | 4,415 | 843 | 2,255 | - | 1,317 | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 4,224 | - | - | - | 3,864 | - | - | 360 | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 2,015 | - | - | - | 30 | - | - | 1,985 | - | - | - |
| MARYLAND | 1,063,359 | 659,019 | 295,838 | - | 40,071 | - | 52,449 | 6,233 | - | 5,540 | 4,209 |
| DEPARTMENT OF AGRICULTURE | 41,927 | 41,040 | - | - | 887 | - | - | - | - | - | 190 |
| DEPARTMENT OF COMMERCE | 36,838 | 35,585 | 1,005 | - | 58 | - | - | - | - | - | - |
| DEPARTMENT OF DEFENSE | 481,315 | 275,875 | 147,579 | - | 3,613 | - | 47,588 | 1,260 | - | 5,400 | 3,279 |
| DEPT. OF HEALTH, EDUC. & WELFARE | 240,050 | 196,532 | 13,590 | - | 22,051 | - | 650 | 3,948 | - | - | 65 |
| DEPARTMENT OF THE INTERIOR | 11,838 | 7,025 | 4,575 | - | 173 | - | - | - | - | - | 616 |
| DEPARTMENT OF TRANSPORTATION | 7,163 | 2,881 | 3,538 | - | 10 | - | - | 118 | - | - | 59 |
| ATOMIC ENERGY COMMISSION | 7,907 | 1,357 | 3,374 | - | 3,103 | - | - | 14 | - | 140 | - |
| NATIONAL AERONAUTICS & SPACE ADMINISTRATION | 225,796 | 98,324 | 119,022 | - | 3,850 | - | 4,211 | 249 | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 6,799 | 400 | - | - | 6,222 | - | - | 177 | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 3,726 | - | 3,155 | - | 104 | - | - | 467 | - | - | - |
| N CAROLINA | 63,908 | 12,963 | 5,632 | - | 37,148 | - | - | 6,162 | - | 1,152 | 851 |
| DEPARTMENT OF AGRICULTURE | 5,509 | 3,118 | - | - | 2,346 | - | - | 45 | - | - | - |
| DEPARTMENT OF COMMERCE | 1,271 | 865 | 2 | - | 232 | - | - | 76 | - | - | 96 |
| DEPARTMENT OF DEFENSE | 11,653 | 4,667 | 3,290 | - | 3,335 | - | - | 361 | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 30,019 | 3,233 | 120 | - | 23,530 | - | - | 1,698 | - | 1,078 | 360 |
| DEPARTMENT OF THE INTERIOR | 2,842 | 629 | 1,880 | - | 229 | - | - | 5 | - | - | 99 |
| DEPARTMENT OF TRANSPORTATION | 723 | 142 | - | - | 166 | - | - | 119 | - | - | 296 |
| ATOMIC ENERGY COMMISSION | 1,792 | 135 | - | - | 1,657 | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMINISTRATION | 2,433 | 174 | 308 | - | 1,019 | - | - | 932 | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 5,961 | - | - | - | 4,004 | - | - | 1,957 | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,705 | - | 32 | - | 630 | - | - | 969 | - | 74 | - |
| S CAROLINA | 17,804 | 2,739 | 154 | - | 8,777 | - | - | 1,050 | - | - | 346 |
| DEPARTMENT OF AGRICULTURE | 3,574 | 2,084 | 89 | - | 1,401 | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 36 | - | - | - | - | - | - | - | - | - | 36 |
| DEPARTMENT OF DEFENSE | 542 | 364 | 21 | - | 157 | - | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 1,844 | - | - | - | 1,654 | - | - | 49 | - | - | 141 |
| DEPARTMENT OF THE INTERIOR | 561 | 232 | - | - | 264 | - | - | - | - | - | 65 |
| DEPARTMENT OF TRANSPORTATION | 264 | - | - | - | 160 | - | - | - | - | - | 104 |
| ATOMIC ENERGY COMMISSION | 8,875 | - | 32 | - | 8,727 | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMINISTRATION | 251 | 59 | 12 | - | 50 | - | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 756 | - | - | - | 756 | - | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,101 | - | - | - | 100 | - | - | 1,001 | - | - | - |
| VIRGINIA | 352,685 | 218,182 | 83,401 | - | 16,134 | - | 1,161 | 6,934 | - | 25,534 | 1,339 |
| DEPARTMENT OF AGRICULTURE | 3,778 | 2,133 | - | - | 1,645 | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 2,180 | 1,074 | 795 | - | - | - | - | - | - | - | 311 |
| DEPT. OF HEALTH, EDUC. & WELFARE | 202,158 | 116,070 | 55,403 | - | 1,609 | - | 300 | 4,148 | - | 24,628 | 394 |
| DEPARTMENT OF THE INTERIOR | 11,789 | 15 | 3,846 | - | 7,267 | - | - | 267 | - | - | 133 |
| DEPARTMENT OF TRANSPORTATION | 4,093 | 3,033 | 454 | - | 473 | - | - | - | - | 906 | 501 |
| ATOMIC ENERGY COMMISSION | 10,957 | 4,919 | 3,552 | - | - | - | - | 1,079 | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMINISTRATION | 2,466 | - | 1,883 | - | 528 | - | - | 55 | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 111,992 | 90,938 | 17,187 | - | 2,748 | - | 861 | 258 | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,888 | - | 10 | - | 1,864 | - | - | 14 | - | - | - |
| | 1,384 | - | 271 | - | - | - | - | 1,113 | - | - | - |

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION,
STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NON- PROFIT INSTI- TUTIONS | OTHER |
|--|---------|------------------------------|---------------------|--|---------------------------------|--|---|-------|--|---|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | FFRDCS ADMIN BY NON- PROFIT INSTI- TUTIONS | | | | |
| | | | | | | | | | | | |
| W VIRGINIA | 19,631 | 5,818 | 770 | - | 5,475 | 5,180 | 566 | 1,126 | 696 | | |
| | 2,528 | 1,487 | 17 | - | 1,041 | - | - | - | - | 19 | |
| | 36 | - | 530 | - | 310 | - | - | - | - | 88 | |
| | 845 | 5 | 110 | - | 1,739 | - | 72 | 1,126 | 172 | | |
| | 3,885 | 750 | 99 | - | 443 | - | 6 | - | 417 | | |
| | 4,226 | 3,506 | - | - | - | - | - | - | - | | |
| | 417 | - | - | - | - | - | - | - | - | | |
| | 25 | 25 | - | - | - | - | - | - | - | | |
| | 356 | 45 | 14 | - | 297 | - | - | - | - | | |
| | 6,337 | - | - | - | 1,157 | 5,180 | - | - | - | | |
| | 976 | - | - | - | 488 | - | 488 | - | - | | |
| | 599,724 | 211,823 | 241,653 | 82,224 | 46,877 | 1,868 | 12,777 | - | 2,502 | | |
| | 17,644 | 9,473 | 40 | - | 7,993 | - | 138 | - | 205 | | |
| | 1,723 | 970 | 45 | - | 503 | - | - | - | - | | |
| 157,327 | 70,766 | 79,830 | 954 | 3,074 | - | 2,703 | - | 687 | | | |
| 33,226 | 1,598 | 73 | - | 25,571 | - | 5,297 | - | 352 | | | |
| 5,109 | 2,630 | - | 1,372 | 673 | - | 82 | - | 1,248 | | | |
| 2,680 | 140 | 1,084 | - | 208 | - | - | - | 10 | | | |
| 97,651 | 197 | 16,945 | 76,801 | 1,830 | 1,868 | - | - | - | | | |
| 275,506 | 126,049 | 143,636 | 3,097 | 2,657 | - | 67 | - | - | | | |
| 3,710 | - | - | - | 3,344 | - | 366 | - | - | | | |
| 5,148 | - | - | - | 1,024 | - | 4,124 | - | - | | | |
| 357,221 | 176,435 | 164,500 | - | 12,116 | - | 3,642 | - | 8 | | | |
| 3,210 | 1,224 | - | - | 1,848 | - | 138 | - | - | 65 | | |
| 75 | - | 5 | - | 5 | - | - | - | - | - | | |
| 81,519 | 58,169 | 22,100 | - | 678 | - | 572 | - | - | 83 | | |
| 10,660 | 114 | 73 | - | 7,660 | - | 2,730 | - | - | 88 | | |
| 1,453 | 1,077 | - | - | 206 | - | 82 | - | - | 292 | | |
| 1,292 | - | 1,000 | - | - | - | - | - | - | - | | |
| 78 | - | - | - | 78 | - | - | - | - | - | | |
| 258,503 | 115,851 | 141,322 | - | 1,310 | - | 20 | - | - | - | | |
| 331 | - | - | - | 331 | - | 100 | - | - | - | | |
| 100 | - | - | - | - | - | - | - | - | - | | |
| 20,413 | 9,237 | 737 | - | 9,191 | - | 631 | - | - | 617 | | |
| 3,448 | 929 | - | - | 2,519 | - | - | - | - | 19 | | |
| 150 | - | 8 | - | 123 | - | - | - | - | - | | |
| 5,991 | 5,359 | 78 | - | 554 | - | - | - | - | 216 | | |
| 5,798 | 1,484 | - | - | 3,765 | - | 333 | - | - | 69 | | |
| 1,225 | 946 | - | - | 210 | - | - | - | - | 313 | | |
| 397 | - | 84 | - | - | - | - | - | - | - | | |
| 618 | - | 523 | - | 95 | - | - | - | - | - | | |
| 842 | 519 | 44 | - | 279 | - | - | - | - | - | | |
| 1,062 | - | - | - | 840 | - | 222 | - | - | - | | |
| 982 | - | - | - | 806 | - | 76 | - | - | - | | |
| 28,276 | 16,918 | 1,631 | - | 6,121 | - | 2,991 | - | - | 615 | | |
| 8,501 | 6,543 | - | - | 1,958 | - | - | - | - | 102 | | |
| 1,189 | 970 | 32 | - | 85 | - | - | - | - | - | | |
| 7,529 | 6,903 | 257 | - | 369 | - | - | - | - | - | | |
| 2,706 | - | - | - | 2,431 | - | 321 | - | - | 44 | | |

E S CENTRAL

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

ALABAMA

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

KENTUCKY

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

MISSISSIPPI

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

TENNESSEE

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

W S CENTRAL

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC. & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMIN
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

| 976 | 211,823 | 241,653 | 82,224 | 46,877 | 1,868 | 12,777 | 2,552 |
|---------|---------|---------|--------|--------|-------|--------|-------|
| 599,724 | 9,473 | 40 | - | 7,993 | - | 138 | - |
| 17,644 | 970 | 45 | - | 503 | - | - | 205 |
| 1,723 | 70,766 | 79,830 | 954 | 3,074 | - | 2,703 | - |
| 157,327 | 1,598 | 73 | - | 25,571 | - | 5,297 | 687 |
| 33,226 | 2,630 | - | 1,372 | 673 | - | 82 | 352 |
| 5,109 | 1,084 | - | - | 208 | - | - | 1,248 |
| 2,680 | 140 | - | - | 1,830 | - | - | 10 |
| 97,651 | 197 | 16,945 | 76,801 | 2,657 | - | 67 | - |
| 275,506 | 126,049 | 143,636 | 3,097 | 3,344 | - | 366 | - |
| 3,710 | - | - | - | 1,024 | - | 4,124 | - |
| 5,148 | - | - | - | - | - | - | - |
| 357,221 | 176,435 | 164,500 | - | 12,116 | - | 3,642 | 528 |
| 3,210 | 1,224 | - | - | 1,848 | - | 138 | - |
| 75 | - | 5 | - | 5 | - | - | 65 |
| 81,519 | 58,169 | 22,100 | - | 678 | - | 572 | - |
| 10,660 | 114 | 73 | - | 7,660 | - | 2,730 | 83 |
| 1,453 | 1,077 | - | - | 206 | - | 82 | 88 |
| 1,292 | - | 1,000 | - | - | - | - | 292 |
| 78 | - | - | - | 78 | - | - | - |
| 258,503 | 115,851 | 141,322 | - | 1,310 | - | 20 | - |
| 331 | - | - | - | 331 | - | - | - |
| 100 | - | - | - | - | - | 100 | - |
| 20,413 | 9,237 | 737 | - | 9,191 | - | 631 | 617 |
| 3,448 | 929 | - | - | 2,519 | - | - | - |
| 150 | - | 8 | - | 123 | - | - | 19 |
| 5,359 | 5,359 | 78 | - | 554 | - | - | - |
| 5,798 | 1,484 | - | - | 3,765 | - | 333 | 216 |
| 1,225 | 946 | - | - | 210 | - | - | 69 |
| 397 | - | 84 | - | - | - | - | 313 |
| 618 | - | 523 | - | 95 | - | - | - |
| 842 | 519 | 44 | - | 279 | - | - | - |
| 1,062 | - | - | - | 840 | - | 222 | - |
| 882 | - | - | - | 806 | - | 76 | - |
| 28,276 | 16,918 | 1,631 | - | 6,121 | - | 2,991 | 615 |
| 8,501 | 6,543 | - | - | 1,958 | - | - | - |
| 1,189 | 970 | 32 | - | 85 | - | - | 102 |
| 7,529 | 6,903 | 257 | - | 369 | - | - | - |
| 2,796 | - | - | - | 2,431 | - | 321 | 44 |
| 459 | 203 | - | - | 142 | - | - | 114 |
| 693 | 140 | - | - | 198 | - | - | 355 |
| 73 | 59 | - | - | 14 | - | - | - |
| 3,905 | 2,100 | 1,342 | - | 416 | - | 47 | - |
| 393 | - | - | - | 378 | - | 15 | - |
| 2,738 | - | - | - | 130 | - | 2,608 | - |
| 193,814 | 9,233 | 74,785 | 82,224 | 19,449 | 1,868 | 5,513 | 742 |
| 2,485 | 777 | 40 | - | 1,668 | - | - | - |
| 309 | - | - | - | 290 | - | - | 19 |
| 62,288 | 335 | 57,395 | 954 | 1,473 | - | 2,131 | - |
| 13,972 | 404 | - | 1,372 | 11,715 | - | 1,913 | 344 |
| 1,972 | - | - | - | 115 | - | - | 81 |
| 298 | - | - | - | 10 | - | - | 288 |
| 96,882 | 138 | 16,422 | 76,801 | 1,643 | 1,868 | - | 10 |
| 12,256 | 7,579 | 928 | 3,097 | 652 | - | - | - |
| 1,924 | - | - | - | 1,795 | - | 129 | - |
| 1,428 | - | - | - | 88 | - | 1,340 | - |
| 834,880 | 202,280 | 522,174 | - | 87,309 | - | 13,224 | 7,631 |
| 25,715 | 18,977 | 71 | - | 6,557 | - | 110 | - |
| 4,416 | 1,985 | 1,654 | - | 320 | - | - | 457 |
| 209,051 | 30,770 | 167,715 | - | 9,750 | - | - | - |
| 54,704 | 788 | 254 | - | 43,168 | - | 2,062 | 2,9 |
| 7,294 | 5,011 | 470 | - | 665 | - | 5,495 | 1,138 |
| 14,458 | 6,878 | 3,255 | - | 658 | - | 10 | 3,069 |
| 6,334 | 407 | 2,062 | - | 3,640 | - | 598 | - |
| 496,091 | 137,464 | 346,240 | - | 11,152 | - | 225 | - |
| 10,680 | - | - | - | 10,594 | - | 1,235 | - |
| 6,137 | - | 453 | - | 805 | - | 56 | 30 |
| | | | | | | 200 | - |

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION,
STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | OTHER |
|--|-----------|------------------------------|---------------------|--|---------------------------------|--|--|---|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NON- PROFIT INSTI- TUTIONS | |
| ARKANSAS | 9,787 | 1,072 | 2,236 | - | 4,796 | - | 880 | - | 803 |
| DEPARTMENT OF AGRICULTURE | 1,840 | 361 | - | - | 1,479 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 182 | 51 | 37 | - | 75 | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 433 | 20 | 371 | - | 42 | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 3,261 | - | - | - | 2,512 | - | 146 | - | 603 |
| DEPARTMENT OF THE INTERIOR | 782 | 622 | - | - | 140 | - | - | - | 20 |
| DEPARTMENT OF TRANSPORTATION | 286 | - | - | - | - | - | 140 | - | 146 |
| ATOMIC ENERGY COMMISSION | 1,998 | 15 | 1,828 | - | 155 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 63 | 3 | - | - | 60 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 383 | - | - | - | 333 | - | 35 | - | 15 |
| OFFICE OF ECONOMIC OPPORTUNITY | 559 | - | - | - | - | - | 559 | - | - |
| LOUISIANA | 146,488 | 19,010 | 107,902 | - | 15,286 | - | 2,344 | - | 1,946 |
| DEPARTMENT OF AGRICULTURE | 11,556 | 10,240 | - | - | 1,316 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 484 | 102 | 48 | - | 130 | - | - | - | 204 |
| DEPARTMENT OF DEFENSE | 2,750 | 114 | 1,779 | - | 857 | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 10,999 | 539 | - | - | 8,318 | - | 1,286 | - | 856 |
| DEPARTMENT OF THE INTERIOR | 625 | 327 | - | - | 122 | - | 5 | - | 171 |
| DEPARTMENT OF TRANSPORTATION | 979 | - | 24 | - | 255 | - | - | - | 700 |
| ATOMIC ENERGY COMMISSION | 277 | - | - | - | 277 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 114,454 | 7,688 | 106,051 | - | 715 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 3,204 | - | - | - | 3,189 | - | - | - | 15 |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,160 | - | - | - | 107 | - | 1,053 | - | - |
| OKLAHOMA | 29,483 | 12,164 | 4,538 | - | 8,230 | - | 3,837 | - | 714 |
| DEPARTMENT OF AGRICULTURE | 2,740 | 1,509 | 20 | - | 1,211 | - | - | - | - |
| DEPARTMENT OF COMMERCE | 869 | 763 | 2 | - | 85 | - | - | - | 19 |
| DEPARTMENT OF DEFENSE | 5,069 | 1,143 | 2,786 | - | 1,140 | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 5,388 | - | 27 | - | 3,515 | - | 1,536 | - | 310 |
| DEPARTMENT OF THE INTERIOR | 2,064 | 1,804 | - | - | 147 | - | - | - | 113 |
| DEPARTMENT OF TRANSPORTATION | 8,847 | 6,749 | 1,600 | - | 226 | - | - | - | 272 |
| ATOMIC ENERGY COMMISSION | 130 | - | - | - | 130 | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 1,265 | 196 | 103 | - | 966 | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 704 | - | - | - | 683 | - | 21 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 2,407 | - | - | - | 127 | - | 2,280 | - | - |
| TEXAS | 649,122 | 170,034 | 407,498 | - | 58,997 | - | 6,163 | 2,262 | 4,168 |
| DEPARTMENT OF AGRICULTURE | 9,579 | 6,867 | 51 | - | 2,551 | - | 110 | - | - |
| DEPARTMENT OF COMMERCE | 2,881 | 1,069 | 1,567 | - | 30 | - | - | - | 215 |
| DEPARTMENT OF DEFENSE | 200,799 | 29,493 | 162,779 | - | 7,711 | - | 816 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 35,556 | 249 | 227 | - | 28,823 | - | 2,527 | 2,062 | 1,168 |
| DEPARTMENT OF THE INTERIOR | 3,823 | 2,258 | 470 | - | 256 | - | 5 | - | 834 |
| DEPARTMENT OF TRANSPORTATION | 4,346 | 129 | 1,631 | - | 177 | - | 458 | - | 1,951 |
| ATOMIC ENERGY COMMISSION | 3,929 | 392 | 234 | - | 3,078 | - | 225 | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 380,309 | 129,577 | 240,386 | - | 9,411 | - | 1,235 | - | - |
| NATIONAL SCIENCE FOUNDATION | 6,389 | - | - | - | 6,389 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 2,011 | - | 453 | - | 571 | - | 787 | 200 | - |
| MOUNTAIN | 1,136,820 | 283,295 | 415,602 | 193,555 | 73,145 | 143,051 | 20,466 | 3,185 | 4,321 |

DEPARTMENT OF AGRICULTURE

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION,

STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | |
|--|---------|------------------------|------------------|----------------------------------|-------------------------|----------------------------------|-------------------------------|---|
| | | | INDUSTRIAL FIRMS | FEDRCS ADMIN BY INDUSTRIAL FIRMS | UNIVERSITIES & COLLEGES | FEDRCS ADMIN BY UNIVS & COLLEGES | OTHER NON-PROFIT INSTITUTIONS | FEDRCS ADMIN BY NON-PROFIT INSTITUTIONS |
| IDAHO DEPARTMENT OF AGRICULTURE DEPARTMENT OF COMMERCE DEPT. OF HEALTH, EDUC. & WELFARE DEPARTMENT OF THE INTERIOR DEPARTMENT OF TRANSPORTATION ATOMIC ENERGY COMMISSION NATIONAL AERONAUTICS & SPACE ADMIN NATIONAL SCIENCE FOUNDATION OFFICE OF ECONOMIC OPPORTUNITY | 75,008 | 4,661 | - | 52,092 | 1,821 | 13,443 | 133 | 2,429 |
| | 3,534 | 2,743 | - | - | 791 | - | - | - |
| | 241 | 96 | - | - | 145 | - | - | - |
| | 298 | 885 | - | - | 237 | - | - | 237 |
| | 1,287 | 21 | - | - | 8 | - | - | 165 |
| | 68,144 | 492 | - | 51,661 | - | 13,443 | 105 | 2,429 |
| | 900 | 445 | - | 431 | 24 | - | - | 6 |
| | 555 | - | - | - | 555 | - | - | - |
| | 28 | - | - | - | - | - | 28 | - |
| | 11,646 | 5,827 | 1,933 | - | 2,556 | - | 772 | 558 |
| MONTANA DEPARTMENT OF AGRICULTURE DEPARTMENT OF COMMERCE DEPT. OF HEALTH, EDUC. & WELFARE DEPARTMENT OF THE INTERIOR DEPARTMENT OF TRANSPORTATION ATOMIC ENERGY COMMISSION NATIONAL AERONAUTICS & SPACE ADMIN NATIONAL SCIENCE FOUNDATION OFFICE OF ECONOMIC OPPORTUNITY | 3,577 | 2,699 | - | - | 878 | - | - | - |
| | 206 | 90 | 45 | - | 142 | - | - | 19 |
| | 2,018 | 2,045 | 1,888 | - | 40 | - | - | - |
| | 2,626 | 993 | - | - | 518 | - | 62 | - |
| | 1,768 | - | - | - | 362 | - | - | 413 |
| | 125 | - | - | - | - | - | - | 125 |
| | 12 | - | - | - | 12 | - | - | - |
| | 582 | - | - | - | - | - | 582 | - |
| | 604 | - | - | - | 604 | - | - | - |
| | 128 | - | - | - | - | - | 128 | - |
| NEVADA DEPARTMENT OF AGRICULTURE DEPARTMENT OF COMMERCE DEPT. OF HEALTH, EDUC. & WELFARE DEPARTMENT OF THE INTERIOR DEPARTMENT OF TRANSPORTATION ATOMIC ENERGY COMMISSION NATIONAL AERONAUTICS & SPACE ADMIN NATIONAL SCIENCE FOUNDATION OFFICE OF ECONOMIC OPPORTUNITY | 190,948 | 35,302 | 138,593 | 3,956 | 2,711 | 9,746 | 369 | 271 |
| | 726 | 282 | - | - | 444 | - | - | - |
| | 24 | - | - | - | 18 | - | - | 6 |
| | 28,938 | 21,575 | 6,964 | - | 399 | - | - | - |
| | 454 | 110 | - | - | 136 | - | 192 | 106 |
| | 4,371 | 3,370 | - | - | 854 | - | - | 147 |
| | 38 | - | 26 | - | - | - | - | 12 |
| | 152,028 | 6,847 | 130,970 | 3,956 | 242 | 9,746 | 267 | - |
| | 3,974 | 3,118 | 633 | - | 223 | - | - | - |
| | 395 | - | - | - | 395 | - | - | - |
| NEW MEXICO DEPARTMENT OF AGRICULTURE DEPARTMENT OF COMMERCE DEPT. OF HEALTH, EDUC. & WELFARE DEPARTMENT OF THE INTERIOR DEPARTMENT OF TRANSPORTATION ATOMIC ENERGY COMMISSION NATIONAL AERONAUTICS & SPACE ADMIN NATIONAL SCIENCE FOUNDATION OFFICE OF ECONOMIC OPPORTUNITY | 444,089 | 138,774 | 50,555 | 137,507 | 9,942 | 99,819 | 6,146 | 956 |
| | 1,607 | 955 | - | - | 652 | - | - | - |
| | 43 | - | 6 | - | 33 | - | - | 4 |
| | 196,658 | 134,132 | 39,302 | 14,134 | 2,531 | 3,352 | 3,207 | - |
| | 2,867 | 1,151 | 1,055 | - | 1,597 | - | 277 | 956 |
| | 2,815 | 90 | - | - | 460 | - | - | 37 |
| | 410 | 423 | 3,766 | 122,657 | 120 | 96,367 | 1,736 | 149 |
| | 224,957 | 2,023 | 6,330 | 716 | 2,859 | 100 | 48 | 200 |
| | 12,076 | - | 96 | - | 949 | - | - | - |
| | 1,045 | - | - | - | 733 | - | 878 | - |
| UTAH DEPARTMENT OF AGRICULTURE DEPARTMENT OF COMMERCE DEPT. OF HEALTH, EDUC. & WELFARE DEPARTMENT OF THE INTERIOR DEPARTMENT OF TRANSPORTATION ATOMIC ENERGY COMMISSION | 61,052 | 21,712 | 19,047 | - | 15,689 | 656 | 3,249 | 699 |
| | 2,821 | 2,134 | - | - | 687 | - | - | - |
| | 17 | - | - | - | 9 | - | - | 8 |
| | 38,858 | 16,495 | 17,897 | - | 2,552 | 656 | 1,914 | - |
| | 8,738 | 230 | 20 | - | 7,173 | - | 275 | 384 |
| | 3,674 | 2,700 | 105 | - | 743 | - | - | 126 |
| | 201 | - | 16 | - | 4 | - | - | 141 |
| | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - |
| | - | - | - | - | - | - | - | - |

ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

NEVADA

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC., & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

NEW MEXICO

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC., & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

UTAH

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC., & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

WYOMING

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC., & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

PACIFIC

DEPARTMENT OF AGRICULTURE
DEPARTMENT OF COMMERCE
DEPARTMENT OF DEFENSE
DEPT. OF HEALTH, EDUC., & WELFARE
DEPARTMENT OF THE INTERIOR
DEPARTMENT OF TRANSPORTATION
ATOMIC ENERGY COMMISSION
NATIONAL AERONAUTICS & SPACE ADMINISTRATION
NATIONAL SCIENCE FOUNDATION
OFFICE OF ECONOMIC OPPORTUNITY

| | | | | | | | | |
|-----------|---------|-----------|---------|---------|---------|--------|---------|--------|
| 190,948 | 35,302 | 138,593 | 3,956 | 2,711 | 9,746 | 369 | 128 | 271 |
| 726 | 282 | - | - | 444 | - | - | - | 6 |
| 24 | - | - | - | 18 | - | - | - | 106 |
| 28,938 | 21,575 | 6,964 | - | 399 | - | - | - | 147 |
| 454 | 110 | - | - | 136 | - | 102 | - | 12 |
| 4,371 | 3,370 | - | - | 854 | - | - | - | - |
| 38 | - | 26 | - | - | 9,746 | 267 | - | - |
| 152,028 | 6,847 | 130,970 | 3,956 | 242 | - | - | - | - |
| 3,974 | 3,118 | 633 | - | 223 | - | - | - | - |
| 395 | - | - | - | 395 | - | - | - | - |
| 444,089 | 138,774 | 50,555 | 137,507 | 9,942 | 99,819 | 6,146 | 956 | 390 |
| 1,607 | 955 | - | - | 652 | - | - | - | 4 |
| 43 | - | 6 | - | 33 | - | - | - | - |
| 196,658 | 134,132 | 39,302 | 14,134 | 2,531 | 3,352 | 3,207 | 956 | 37 |
| 2,867 | - | - | - | 1,597 | - | 277 | - | 149 |
| 2,815 | 1,151 | 1,055 | - | 460 | - | - | - | 200 |
| 410 | 90 | - | - | 120 | - | - | - | - |
| 224,957 | 423 | 3,766 | 122,657 | 8 | 96,367 | 1,736 | - | - |
| 12,076 | 2,023 | 6,330 | 716 | 2,859 | 100 | 48 | - | - |
| 1,045 | - | 96 | - | 949 | - | - | - | - |
| 1,611 | - | - | - | 733 | - | 878 | - | - |
| 61,052 | 21,712 | 19,047 | - | 15,689 | 656 | 3,249 | - | 699 |
| 2,821 | 2,134 | - | - | 687 | - | - | - | 8 |
| 17 | - | - | - | 9 | - | - | - | - |
| 38,858 | 16,495 | 17,897 | - | 2,552 | 656 | 1,914 | - | 384 |
| 8,738 | 230 | 20 | - | 7,173 | - | 275 | - | 126 |
| 3,674 | 2,700 | 105 | - | 743 | - | - | - | 181 |
| 201 | - | 16 | - | 4 | - | - | - | - |
| 1,195 | - | 32 | - | 1,163 | - | 25 | - | - |
| 1,442 | 153 | 977 | - | 287 | - | - | - | - |
| 2,702 | - | - | - | 2,702 | - | 1,035 | - | - |
| 1,404 | - | - | - | 369 | - | - | - | 259 |
| 7,161 | 4,224 | 1 | - | 2,662 | - | 15 | - | - |
| 972 | 415 | - | - | 557 | - | - | - | 4 |
| 27 | - | - | - | 23 | - | - | - | 12 |
| 21 | - | - | - | 181 | - | 15 | - | 118 |
| 208 | - | - | - | 768 | - | - | - | 125 |
| 4,690 | 3,803 | 1 | - | - | - | - | - | - |
| 125 | - | - | - | 72 | - | - | - | - |
| 72 | - | - | - | 117 | - | - | - | - |
| 123 | 6 | - | - | 923 | - | - | - | - |
| 923 | - | - | - | - | - | - | - | - |
| 4,404,125 | 594,879 | 2,949,708 | 32,061 | 270,304 | 311,393 | 76,893 | 151,914 | 16,973 |
| 31,756 | 25,889 | 36 | - | 5,748 | - | 82 | - | 1 |
| 16,528 | 10,841 | 2,642 | - | 613 | - | 651 | 3 | 1,778 |
| 2,432,860 | 369,439 | 1,891,327 | - | 47,328 | 10,945 | 24,445 | 88,907 | 469 |
| 177,202 | 2,483 | 3,367 | - | 117,525 | 3,051 | 33,293 | 8,321 | 9,162 |
| 28,221 | 16,591 | 7,294 | - | 2,287 | - | 171 | - | 1,878 |
| 137,538 | 6,150 | 125,593 | - | 2,070 | - | 185 | - | 3,540 |
| 370,467 | 1,407 | 85,344 | 32,061 | 19,410 | 178,130 | 648 | 53,322 | 145 |
| 1,144,249 | 162,079 | 832,886 | - | 25,374 | 119,193 | 3,878 | 839 | - |
| 48,862 | - | 850 | - | 46,529 | 74 | 925 | 484 | - |
| 16,442 | - | 369 | - | 3,420 | - | 12,615 | 38 | - |

TABLE C-85. FEDERAL OBLIGATIONS FOR RESEARCH AND DEVELOPMENT, BY GEOGRAPHIC DIVISION,
STATE, AGENCY, AND PERFORMER, FISCAL YEAR 1970

| GEOGRAPHIC DIVISION, STATE, AND AGENCY | TOTAL | FEDERAL INTRAMURAL (1) | EXTRAMURAL | | | | | | OTHER NON- PROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NON- PROFIT INSTI- TUTIONS | OTHER |
|--|-----------|------------------------------|---------------------|--|---------------------------------|--|--|--------|--|---|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY IN- DUSTRIAL FIRMS | UNIVER- SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NON- PROFIT INSTI- TUTIONS | | | | |
| ALASKA | 43,179 | 10,849 | 23,886 | - | 5,586 | - | - | 1,187 | - | 1,671 | |
| DEPARTMENT OF AGRICULTURE | 1,524 | 1,133 | - | - | 391 | - | - | - | - | - | |
| DEPARTMENT OF COMMERCE | 3,081 | 2,443 | - | - | 21 | - | - | - | - | 617 | |
| DEPARTMENT OF DEFENSE | 4,418 | 2,450 | 148 | - | 1,820 | - | - | - | - | - | |
| DEPT. OF HEALTH, EDUC. & WELFARE | 1,467 | 766 | 100 | - | 536 | - | - | - | - | 65 | |
| DEPARTMENT OF THE INTERIOR | 4,641 | 3,581 | - | - | 196 | - | - | - | - | 864 | |
| DEPARTMENT OF TRANSPORTATION | 125 | - | - | - | - | - | - | - | - | 125 | |
| ATOMIC ENERGY COMMISSION | 21,603 | 462 | 20,869 | - | 272 | - | - | - | - | - | |
| NATIONAL AERONAUTICS & SPACE ADMIN | 3,085 | 14 | 2,769 | - | 302 | - | - | - | - | - | |
| NATIONAL SCIENCE FOUNDATION | 1,980 | - | - | - | 1,980 | - | - | - | - | - | |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,255 | - | - | - | 68 | - | - | 1,187 | - | - | |
| CALIFORNIA | 3,871,053 | 547,625 | 2,607,021 | 31,723 | 205,835 | 308,257 | 63,179 | 96,531 | 10,882 | - | |
| DEPARTMENT OF AGRICULTURE | 18,296 | 16,094 | 28 | - | 2,144 | - | - | 30 | - | - | |
| DEPARTMENT OF COMMERCE | 5,411 | 2,139 | 2,642 | - | 105 | - | - | 252 | - | 270 | |
| DEPARTMENT OF DEFENSE | 2,220,160 | 359,029 | 1,701,174 | - | 38,763 | 8,405 | 23,882 | 88,907 | - | - | |
| DEPT. OF HEALTH, EDUC. & WELFARE | 135,229 | 1,194 | 3,210 | - | 86,988 | 2,455 | 27,477 | 6,480 | - | 7,425 | |
| DEPARTMENT OF THE INTERIOR | 14,287 | 5,262 | 7,264 | - | 1,342 | - | 15 | - | - | 404 | |
| DEPARTMENT OF TRANSPORTATION | 18,685 | 4,474 | 9,378 | - | 1,920 | - | 130 | - | - | 2,783 | |
| ATOMIC ENERGY COMMISSION | 284,123 | 534 | 58,270 | 31,723 | 15,064 | 178,130 | 382 | 20 | - | - | |
| NATIONAL AERONAUTICS & SPACE ADMIN | 1,129,095 | 158,899 | 823,836 | - | 22,930 | 119,193 | 3,638 | 599 | - | - | |
| NATIONAL SCIENCE FOUNDATION | 35,921 | - | 850 | - | 33,726 | 74 | 787 | 484 | - | - | |
| OFFICE OF ECONOMIC OPPORTUNITY | 9,846 | - | 369 | - | 2,853 | - | 6,586 | 38 | - | - | |
| HAWAII | 43,815 | 9,231 | 21,149 | - | 10,756 | - | 1,833 | - | 846 | - | |
| DEPARTMENT OF AGRICULTURE | 1,324 | 751 | - | - | 521 | - | - | - | - | - | |
| DEPARTMENT OF COMMERCE | 1,709 | 1,577 | - | - | 12 | - | - | 52 | - | 120 | |
| DEPARTMENT OF DEFENSE | 22,198 | 4,525 | 15,836 | - | 1,780 | - | - | 57 | - | - | |
| DEPT. OF HEALTH, EDUC. & WELFARE | 4,037 | 195 | - | - | 2,915 | - | 506 | - | - | 421 | |
| DEPARTMENT OF THE INTERIOR | 90 | 668 | - | - | 160 | - | - | - | - | 77 | |
| DEPARTMENT OF TRANSPORTATION | 85 | - | - | - | - | - | - | - | - | 83 | |
| ATOMIC ENERGY COMMISSION | 3,240 | - | 2,544 | - | 551 | - | - | - | - | 145 | |
| NATIONAL AERONAUTICS & SPACE ADMIN | 5,387 | 1,515 | 2,769 | - | 1,103 | - | - | - | - | - | |
| NATIONAL SCIENCE FOUNDATION | 3,852 | - | - | - | 3,714 | - | - | 138 | - | - | |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,080 | - | - | - | - | - | - | 1,080 | - | - | |
| OREGON | 33,848 | 8,338 | 127 | - | 14,898 | 596 | 6,401 | 1,841 | 1,647 | - | |
| DEPARTMENT OF AGRICULTURE | 5,026 | 3,893 | - | - | 1,133 | - | - | - | - | 462 | |
| DEPARTMENT OF COMMERCE | 804 | 102 | - | - | 48 | - | - | 192 | - | - | |
| DEPARTMENT OF DEFENSE | 3,025 | 72 | 34 | - | 2,638 | - | - | 281 | - | - | |
| DEPT. OF HEALTH, EDUC. & WELFARE | 15,464 | - | 14 | - | 8,480 | 596 | 3,772 | 1,841 | - | 761 | |
| DEPARTMENT OF THE INTERIOR | 4,533 | 3,947 | - | - | 378 | - | - | - | - | 208 | |
| DEPARTMENT OF TRANSPORTATION | 216 | - | - | - | - | - | - | - | - | 216 | |
| ATOMIC ENERGY COMMISSION | 1,266 | 296 | - | - | 970 | - | - | - | - | - | |
| NATIONAL AERONAUTICS & SPACE ADMIN | 607 | 28 | 79 | - | 500 | - | - | - | - | - | |
| NATIONAL SCIENCE FOUNDATION | 351 | - | - | - | 351 | - | - | - | - | - | |
| OFFICE OF ECONOMIC OPPORTUNITY | 2,554 | - | - | - | 400 | - | 2,154 | - | - | - | |

| | | | | | | | | | | |
|------------------------------------|-----------|---------|-----------|--------|--------|---------|---|--------|--------|-------|
| DEPARTMENT OF AGRICULTURE | 18,296 | 16,094 | 28 | - | 2,144 | - | - | 30 | - | 270 |
| DEPARTMENT OF COMMERCE | 5,411 | 2,139 | 2,642 | - | 105 | - | - | 252 | 3 | - |
| DEPARTMENT OF DEFENSE | 2,220,160 | 359,029 | 1,701,174 | - | 38,763 | 8,405 | - | 23,882 | 88,907 | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 135,229 | 1,194 | 3,210 | - | 86,988 | 2,455 | - | 27,477 | 6,480 | 7,425 |
| DEPARTMENT OF THE INTERIOR | 14,287 | 5,262 | 7,264 | - | 1,342 | - | - | 15 | - | 404 |
| DEPARTMENT OF TRANSPORTATION | 18,685 | 4,474 | 9,378 | - | 1,920 | - | - | 130 | - | 2,783 |
| ATOMIC ENERGY COMMISSION | 284,123 | 534 | 58,270 | 31,723 | 15,064 | 178,130 | - | 382 | 20 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 1,129,095 | 158,899 | 823,836 | - | 22,930 | 119,193 | - | 3,638 | 599 | - |
| NATIONAL SCIENCE FOUNDATION | 35,921 | - | 850 | - | 33,726 | 74 | - | 787 | 484 | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 9,846 | - | 369 | - | 2,853 | - | - | 6,586 | 38 | - |
| HAWAII | 43,815 | 9,231 | 21,149 | - | 10,756 | - | - | 1,833 | - | 846 |
| DEPARTMENT OF AGRICULTURE | 1,324 | 751 | - | - | 521 | - | - | 52 | - | - |
| DEPARTMENT OF COMMERCE | 1,709 | 1,577 | - | - | 12 | - | - | - | - | 120 |
| DEPARTMENT OF DEFENSE | 22,198 | 4,525 | 15,836 | - | 1,780 | - | - | 57 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 4,037 | 195 | - | - | 2,915 | - | - | 506 | - | 421 |
| DEPARTMENT OF THE INTERIOR | 905 | 668 | - | - | 160 | - | - | - | - | 77 |
| DEPARTMENT OF TRANSPORTATION | 83 | - | - | - | - | - | - | - | - | 83 |
| ATOMIC ENERGY COMMISSION | 3,240 | - | 2,544 | - | 551 | - | - | - | - | 145 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 5,387 | 1,515 | 2,769 | - | 1,103 | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 3,852 | - | - | - | 3,714 | - | - | 138 | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,080 | - | - | - | - | - | - | 1,080 | - | - |
| OREGON | 33,948 | 8,338 | 127 | - | 14,898 | 596 | - | 6,401 | 1,841 | 1,647 |
| DEPARTMENT OF AGRICULTURE | 5,026 | 3,893 | - | - | 1,133 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 804 | 102 | - | - | 48 | - | - | 192 | - | 462 |
| DEPARTMENT OF DEFENSE | 3,025 | 72 | 34 | - | 2,638 | - | - | 281 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 15,464 | - | 14 | - | 8,480 | 596 | - | 3,772 | 1,841 | 761 |
| DEPARTMENT OF THE INTERIOR | 4,533 | 3,947 | - | - | 378 | - | - | - | - | 208 |
| DEPARTMENT OF TRANSPORTATION | 216 | - | - | - | - | - | - | - | - | 216 |
| ATOMIC ENERGY COMMISSION | 1,266 | 296 | - | - | 970 | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 607 | 28 | 79 | - | 500 | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 351 | - | - | - | 351 | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 2,556 | - | - | - | 400 | - | - | 2,156 | - | - |
| WASHINGTON | 412,230 | 18,836 | 297,525 | 338 | 33,229 | 2,540 | - | 4,293 | 53,542 | 1,927 |
| DEPARTMENT OF AGRICULTURE | 5,586 | 4,018 | 8 | - | 1,559 | - | - | - | - | 1 |
| DEPARTMENT OF COMMERCE | 5,523 | 4,580 | - | - | 427 | - | - | 207 | - | 309 |
| DEPARTMENT OF DEFENSE | 183,059 | 3,363 | 174,135 | - | 2,327 | 2,540 | - | 225 | - | 469 |
| DEPT. OF HEALTH, EDUC. & WELFARE | 21,005 | 328 | 43 | - | 18,606 | - | - | 1,538 | - | 490 |
| DEPARTMENT OF THE INTERIOR | 3,855 | 3,133 | 30 | - | 211 | - | - | 156 | - | 325 |
| DEPARTMENT OF TRANSPORTATION | 118,429 | 1,676 | 116,215 | - | 150 | - | - | 55 | - | 333 |
| ATOMIC ENERGY COMMISSION | 60,235 | 115 | 3,661 | 338 | 2,553 | - | - | 266 | 53,302 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 6,075 | 1,623 | 3,433 | - | 539 | - | - | 240 | 240 | - |
| NATIONAL SCIENCE FOUNDATION | 6,758 | - | - | - | 6,758 | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,705 | - | - | - | 99 | - | - | 1,606 | - | - |
| OUT AREAS | 17,280 | 4,397 | 6,630 | - | 4,277 | 1,400 | - | 156 | - | 420 |
| DEPARTMENT OF AGRICULTURE | 2,474 | 970 | - | - | 1,504 | - | - | - | - | - |
| DEPARTMENT OF COMMERCE | 338 | - | 3 | - | - | - | - | - | - | 335 |
| DEPARTMENT OF DEFENSE | 7,873 | 2,176 | 5,677 | - | 20 | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 1,917 | 244 | - | - | 1,505 | - | - | 116 | - | 52 |
| DEPARTMENT OF THE INTERIOR | 1,053 | 920 | - | - | 100 | - | - | - | - | 33 |
| DEPARTMENT OF TRANSPORTATION | - | - | - | - | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION | 1,895 | - | 950 | - | 945 | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 174 | 87 | - | - | 87 | - | - | - | - | - |
| NATIONAL SCIENCE FOUNDATION | 1,516 | - | - | - | 116 | 1,400 | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 40 | - | - | - | - | - | - | 40 | - | - |
| OFF ABROAD | 56,826 | 43,344 | 7,154 | - | 455 | 1,600 | - | 143 | 4,130 | - |
| DEPARTMENT OF AGRICULTURE | 327 | 303 | - | - | 4 | - | - | 20 | - | - |
| DEPARTMENT OF COMMERCE | 313 | - | - | - | 313 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE | 12,728 | 5,451 | 7,154 | - | - | - | - | 123 | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE | 301 | 301 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF TRANSPORTATION | - | - | - | - | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION | - | - | - | - | - | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 4,130 | - | - | - | - | - | - | - | 4,130 | - |
| NATIONAL SCIENCE FOUNDATION | 37,289 | 37,289 | - | - | - | - | - | - | - | - |
| OFFICE OF ECONOMIC OPPORTUNITY | 1,736 | - | - | - | 138 | 1,600 | - | - | - | - |

TABLE C-86. FEDERAL OBLIGATIONS FOR RED PLANT, BY GEOGRAPHIC DIVISION, STATE, AND PERFORMER SUPPORTED

FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| GEOGRAPHIC DIVISION AND STATE | TOTAL | FEDERAL INTRAMURAL | EXTRAMURAL | | | | | | OTHER NONPROFIT INSTI- TUTIONS | FFRDCS ADMIN BY NONPROFIT INSTI- TUTIONS | OTHER |
|----------------------------------|---------|-----------------------|---------------------|---|--------------------------------|---|---|--------|---|--|-------|
| | | | INDUSTRIAL FIRMS | FFRDCS ADMIN BY INDUSTRIAL FIRMS | UNIVER SITIES & COLLEGES | FFRDCS ADMIN BY UNIVS & COLLEGES | OTHER NONPROFIT INSTI- TUTIONS | | | | |
| TOTAL, ALL STATES | 519,614 | 162,158 | 40,535 | 60,866 | 56,114 | 169,016 | 4,740 | 24,100 | 2,085 | | |
| NEW ENGLAND | 14,970 | 6,145 | 3,034 | - | 5,038 | 573 | 5 | - | 175 | | |
| CONNECTICUT | 2,765 | 2,364 | 10 | - | 386 | - | 5 | - | - | | |
| MAINE | 122 | - | - | - | 10 | - | - | - | 112 | | |
| MASS | 10,677 | 2,908 | 3,024 | - | 4,109 | 573 | - | - | 63 | | |
| NEW HAMPSHIRE | 42 | 33 | - | - | 9 | - | - | - | - | | |
| RHODE ISLAND | 1,326 | 840 | - | - | 486 | - | - | - | - | | |
| VERMONT | 38 | - | - | - | 38 | - | - | - | - | | |
| M ATLANTIC | 51,513 | 6,448 | 6,073 | 12,879 | 8,552 | 16,055 | 1,462 | - | 44 | | |
| NEW JERSEY | 5,631 | 3,284 | 1,687 | - | 593 | 67 | - | - | - | | |
| NEW YORK | 26,667 | 985 | 690 | 5,332 | 3,588 | 15,988 | 40 | - | 44 | | |
| PENN | 19,215 | 2,179 | 3,696 | 7,547 | 4,371 | - | 1,422 | - | - | | |
| E N CENTRAL | 119,876 | 14,076 | 131 | 894 | 16,819 | 85,556 | 2,400 | - | - | | |
| ILLINOIS | 94,739 | 69 | - | - | 6,714 | 85,556 | 2,400 | - | - | | |
| INDIANA | 418 | - | - | - | 418 | - | - | - | - | | |
| MICHIGAN | 3,807 | 3,382 | - | - | 425 | - | - | - | - | | |
| OHIO | 20,312 | 10,598 | 42 | 894 | 8,778 | - | - | - | - | | |
| WISCONSIN | 600 | 27 | 89 | - | 484 | - | - | - | - | | |
| W N CENTRAL | 9,263 | 1,492 | 2,035 | - | 1,316 | 915 | 600 | 2,905 | - | | |
| IOWA | 1,152 | - | - | - | 237 | 915 | - | - | - | | |
| KANSAS | 85 | 33 | - | - | 52 | - | - | - | - | | |
| MINNESOTA | 778 | 617 | 2 | - | 159 | - | - | - | - | | |
| MISSOURI | 4,247 | - | - | - | 742 | - | 670 | 2,905 | - | | |
| NEBRASKA | 858 | 815 | - | - | 43 | - | - | - | - | | |
| N DAKOTA | 66 | 27 | - | - | 39 | - | - | - | - | | |
| S DAKOTA | 2,077 | - | 2,033 | - | 44 | - | - | - | - | | |
| S ATLANTIC | 72,303 | 55,149 | 502 | 1,572 | 14,311 | 679 | 90 | - | - | | |
| DELAWARE | 12 | 4 | - | - | 8 | - | - | - | - | | |
| DIST OF COL | 6,425 | 2,328 | - | - | 4,067 | - | 30 | - | - | | |
| FLORIDA | 33,240 | 30,182 | 100 | - | 2,958 | - | - | - | - | | |
| GEORGIA | 2,026 | 808 | - | - | 1,218 | - | - | - | - | | |
| MARYLAND | 20,282 | 19,733 | 169 | - | 380 | - | 60 | - | - | | |
| N CAROLINA | 3,144 | - | 20 | - | 3,064 | - | - | - | - | | |
| S CAROLINA | 1,754 | 114 | - | 1,572 | 68 | - | - | - | - | | |
| VIRGINIA | 3,549 | 1,980 | 213 | - | 1,352 | 4 | - | - | - | | |
| N VIRGINIA | 1,871 | - | - | - | 1,196 | 675 | - | - | - | | |
| E S CENTRAL | 16,787 | 4,543 | 2,253 | 9,412 | 393 | 164 | - | - | 22 | | |
| ALABAMA | 1,785 | 1,730 | - | - | 55 | - | - | - | - | | |
| KENTUCKY | 813 | 639 | 60 | - | 114 | - | - | - | - | | |
| MISSISSIPPI | 812 | 748 | - | - | 42 | - | - | - | 22 | | |
| TENNESSEE | 13,377 | 1,426 | 2,193 | 9,412 | 182 | 164 | - | - | - | | |
| W S CENTRAL | 9,364 | 2,986 | 1,238 | - | 1,040 | - | - | 4,100 | - | | |
| ARKANSAS | 75 | - | - | - | 75 | - | - | - | - | | |
| LOUISIANA | 1,089 | 820 | - | - | 269 | - | - | - | - | | |
| OKLAHOMA | 127 | 39 | - | - | 88 | - | - | - | - | | |
| TEXAS | 8,073 | 2,127 | 1,238 | - | 608 | - | - | 4,100 | - | | |

| | 9,263 | 1,402 | 2,035 | - | 1,316 | 915 | 600 | 2,905 | - |
|-------------|---------|--------|--------|--------|--------|--------|-----|--------|-----|
| W N CENTRAL | | | | | | | | | |
| IOWA | 1,152 | - | - | - | 237 | 915 | - | - | - |
| KANSAS | 85 | 33 | - | - | 52 | - | - | - | - |
| MINNESOTA | 778 | 617 | 2 | - | 159 | - | - | - | - |
| MISSOURI | 4,247 | - | - | - | 742 | - | 670 | 2,905 | - |
| NEBRASKA | 858 | 815 | - | - | 43 | - | - | - | - |
| N DAKOTA | 66 | 27 | - | - | 39 | - | - | - | - |
| S DAKOTA | 2,077 | - | 2,033 | - | 44 | - | - | - | - |
| S ATLANTIC | | | | | | | | | |
| DELAWARE | 72,303 | 55,149 | 502 | 1,572 | 14,311 | 679 | 90 | - | - |
| DIST OF COL | | | | | | | | | |
| FLORIDA | 12 | 4 | - | - | 8 | - | 30 | - | - |
| GEORGIA | 6,425 | 2,328 | - | - | 4,067 | - | - | - | - |
| MARYLAND | 33,240 | 30,182 | 100 | - | 2,958 | - | - | - | - |
| N CAROLINA | 2,026 | 808 | 169 | - | 1,218 | - | - | - | - |
| N CAROLINA | 20,282 | 19,733 | 20 | - | 380 | - | 60 | - | - |
| S CAROLINA | 3,144 | - | - | - | 3,064 | - | - | - | - |
| VIRGINIA | 1,754 | 114 | - | 1,572 | 68 | - | - | - | - |
| N VIRGINIA | 3,549 | 1,980 | 213 | - | 1,352 | 4 | - | - | - |
| | 1,871 | - | - | - | 1,196 | 675 | - | - | - |
| E S CENTRAL | | | | | | | | | |
| ALABAMA | 16,787 | 4,543 | 2,253 | 9,412 | 393 | 164 | - | - | 22 |
| KENTUCKY | 1,785 | 1,730 | - | - | 55 | - | - | - | - |
| MISSISSIPPI | 813 | 639 | 60 | - | 114 | - | - | - | - |
| MISSISSIPPI | 812 | 748 | - | - | 42 | - | - | - | 22 |
| TENNESSEE | 13,377 | 1,426 | 2,193 | 9,412 | 182 | 164 | - | - | - |
| W S CENTRAL | | | | | | | | | |
| ARKANSAS | 9,364 | 2,986 | 1,238 | - | 1,040 | - | - | 4,100 | - |
| LOUISIANA | 75 | - | - | - | 75 | - | - | - | - |
| LOUISIANA | 1,089 | 820 | - | - | 269 | - | - | - | - |
| OKLAHOMA | 127 | 39 | - | - | 88 | - | - | - | - |
| TEXAS | 8,073 | 2,127 | 1,238 | - | 608 | - | - | 4,100 | - |
| MOUNTAIN | | | | | | | | | |
| ARIZONA | 112,367 | 22,641 | 14,039 | 32,455 | 2,308 | 40,747 | 145 | - | 32 |
| COLORADO | 1,633 | 1,574 | 3 | - | 10 | 46 | - | - | - |
| IDAHO | 5,212 | 4,508 | 4 | - | 487 | 213 | - | - | - |
| MONTANA | 23,043 | 121 | 640 | 13,825 | 309 | 8,116 | - | - | 32 |
| NEVADA | 48 | 24 | - | - | 24 | - | - | - | - |
| NEVADA | 17,223 | 291 | 12,661 | 4,110 | 66 | 95 | - | - | - |
| NEW MEXICO | 63,606 | 15,633 | 686 | 14,520 | 345 | 32,277 | 145 | - | - |
| UTAH | 974 | 490 | 45 | - | 439 | - | - | - | - |
| WYOMING | 628 | - | - | - | 628 | - | - | - | - |
| PACIFIC | | | | | | | | | |
| ALASKA | 104,432 | 43,402 | 9,267 | 3,654 | 6,293 | 23,812 | 38 | 17,055 | 911 |
| CALIFORNIA | 459 | 315 | 17 | - | 127 | - | - | - | - |
| HAWAII | 85,928 | 39,884 | 8,844 | 3,654 | 4,126 | 23,812 | 18 | 5,220 | 370 |
| OREGON | 506 | 445 | - | - | 61 | - | - | - | - |
| WASHINGTON | 2,269 | 1,069 | - | - | 1,079 | - | - | - | 121 |
| WASHINGTON | 15,270 | 1,689 | 406 | - | 900 | - | 20 | 11,835 | 420 |
| OUT AREAS | | | | | | | | | |
| | 3,457 | 399 | 1,963 | - | 44 | 150 | - | - | 901 |
| OFF ABROAD | | | | | | | | | |
| | 5,282 | 4,877 | - | - | - | 365 | - | 40 | - |

NOTE- THE OBLIGATIONS OF THE TEN MAJOR RED SUPPORTING AGENCIES INCLUDED IN THIS TABLE REPRESENT MORE THAN 98 PERCENT OF TOTAL FEDERAL RED PLANT OBLIGATIONS IN FY 1970.

TABLE C-97. FEDERAL OBLIGATIONS FOR R&D PLANT, BY GEOGRAPHIC DIVISION, STATE, AND AGENCY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| GEOGRAPHIC DIVISION AND STATE | TOTAL | DEPT. OF AGRICULTURE | DEPT. OF COMMERCE | DEPT. OF DEFENSE | DEPT. OF HEALTH, EDUCATION & WELFARE | DEPT. OF INTERIOR | DEPT. OF TRANSPORTATION | ATOMIC ENERGY COMMISSION | NATIONAL AERONAUTICS & SPACE ADMIN | NATIONAL SCIENCE FOUNDATION | OFFICE OF ECONOMIC OPPORTUNITY |
|-------------------------------|---------|----------------------|-------------------|------------------|--------------------------------------|-------------------|-------------------------|--------------------------|------------------------------------|-----------------------------|--------------------------------|
| TOT, ALL ST | 519,614 | 5,250 | 3,883 | 140,581 | 31,210 | 10,610 | 5,470 | 265,859 | 33,416 | 23,335 | - |
| NEW ENGLAND | 14,970 | 58 | 169 | 7,200 | 370 | 37 | 558 | 4,486 | 616 | 1,476 | - |
| CONNECTICUT | 2,765 | 10 | - | 1,886 | - | - | 558 | 245 | - | 146 | - |
| MAINE | 122 | 10 | 75 | - | - | - | - | - | - | - | - |
| MASS | 10,677 | 13 | 94 | 4,261 | 370 | 37 | - | 4,241 | 616 | 1,082 | - |
| NEW HAMPSHIRE | 42 | 9 | - | 33 | - | - | - | - | - | - | - |
| VERMONT | 1,326 | 7 | - | 1,100 | - | - | - | - | - | 219 | - |
| ATLANTIC | 51,513 | 97 | 44 | 7,100 | - | 3,576 | 452 | 34,129 | 405 | 5,720 | - |
| NEW JERSEY | 5,631 | 12 | - | 2,924 | - | 1,511 | 366 | 641 | 76 | 121 | - |
| NEW YORK | 26,667 | 29 | 44 | 2,044 | - | 543 | - | 22,165 | 160 | 1,682 | - |
| PENN | 19,215 | 46 | - | 2,132 | - | 1,522 | 106 | 11,323 | 169 | 3,917 | - |
| F N CENTRAL | 119,876 | 153 | - | 15,106 | 8,585 | 2,412 | - | 87,599 | 4,072 | 1,949 | - |
| ILLINOIS | 94,739 | 31 | - | 4,925 | - | 2,400 | - | 86,172 | - | 1,211 | - |
| INDIANA | 418 | 29 | - | 265 | - | - | - | 124 | - | - | - |
| MICHIGAN | 3,807 | 29 | - | 3,310 | - | - | - | 200 | 92 | 176 | - |
| OHIO | 20,312 | 34 | - | 6,606 | 8,585 | 12 | - | 953 | 3,980 | 142 | - |
| WISCONSIN | 600 | 30 | - | - | - | - | - | 150 | - | 420 | - |
| W N CENTRAL | 9,263 | 1,590 | - | 100 | 2,905 | 2,194 | 27 | 1,012 | 5 | 1,430 | - |
| IOWA | 1,152 | 30 | - | - | - | 140 | - | 915 | - | 67 | - |
| KANSAS | 85 | 52 | - | - | - | - | - | 21 | - | 12 | - |
| MINNESOTA | 778 | 613 | - | 40 | - | - | 27 | 76 | 5 | 17 | - |
| MISSOURI | 4,247 | 28 | - | 30 | 2,905 | - | - | - | - | 1,284 | - |
| NEBRASKA | 858 | 833 | - | - | - | - | - | - | - | 25 | - |
| N DAKOTA | 66 | 20 | - | - | - | 21 | - | - | - | 25 | - |
| S DAKOTA | 2,077 | 14 | - | 30 | - | 2,033 | - | - | - | - | - |
| S ATLANTIC | 72,303 | 1,120 | 894 | 46,373 | 10,507 | 455 | 187 | 1,709 | 7,055 | 4,003 | - |
| DELAWARE | 12 | 12 | - | - | - | - | - | - | - | - | - |
| DIST OF COL | 6,425 | - | - | 2,261 | 4,067 | 54 | - | - | - | - | - |
| FLORIDA | 33,240 | 63 | 100 | 25,394 | 2,376 | 158 | - | 1 | 12 | 30 | - |
| GEORGIA | 2,026 | 801 | - | 34 | - | - | - | 8 | 4,584 | 557 | - |
| MARYLAND | 20,282 | 136 | 794 | 17,553 | 202 | 43 | 85 | 5 | 1,234 | 1,186 | - |
| N CAROLINA | 3,144 | 42 | - | 150 | 2,631 | 20 | - | 108 | - | 127 | - |
| S CAROLINA | 1,754 | 23 | - | - | - | - | - | - | - | 301 | - |
| VIRGINIA | 1,754 | 23 | - | - | - | - | - | - | - | - | - |

| PEN. | 19,213 | 46 | - | 2,132 | - | 8,585 | 2,412 | 1,522 | 1,6 | 11,323 | 1,949 | 3,917 |
|-------------|---------|-------|-------|--------|---|--------|-------|-------|-----|--------|--------|-------|
| F N CENTRAL | 119,876 | 153 | - | 15,176 | - | 8,585 | 2,412 | - | - | 87,599 | 4,372 | 1,949 |
| ILLINOIS | 94,739 | 31 | - | 4,925 | - | - | 2,400 | - | - | 86,772 | - | 1,211 |
| INDIANA | 418 | 29 | - | 265 | - | - | - | - | - | 124 | - | - |
| MICHIGAN | 3,807 | 29 | - | 3,310 | - | - | - | - | - | 280 | 92 | 176 |
| OHIO | 20,312 | 34 | - | 6,606 | - | 8,585 | 12 | - | - | 953 | 3,980 | 142 |
| WISCONSIN | 600 | 30 | - | - | - | - | - | - | - | 150 | - | 420 |
| N N CENTRAL | 9,263 | 1,590 | - | 100 | - | 2,905 | 2,194 | 27 | - | 1,512 | 5 | 1,430 |
| IOWA | 1,152 | 30 | - | - | - | - | 140 | - | - | 915 | - | 67 |
| KANSAS | 85 | 52 | - | - | - | - | - | - | - | 21 | - | 12 |
| MINNESOTA | 778 | 613 | - | 40 | - | - | - | 27 | - | 76 | 5 | 17 |
| MISSOURI | 4,247 | 28 | - | 30 | - | 2,905 | - | - | - | - | - | 1,284 |
| NEBRASKA | 858 | 833 | - | - | - | - | - | - | - | - | - | 2 |
| N DAKOTA | 66 | 20 | - | - | - | - | 21 | - | - | - | - | 25 |
| S DAKOTA | 2,077 | 14 | - | 30 | - | - | 2,033 | - | - | - | - | - |
| S ATLANTIC | 72,303 | 1,120 | 894 | 46,373 | - | 10,507 | 455 | 187 | - | 1,709 | 7,055 | 4,003 |
| DELAWARE | 12 | 12 | - | - | - | - | - | - | - | - | - | - |
| DIST OF COL | 6,425 | - | - | 2,261 | - | 4,067 | 54 | - | - | 1 | 12 | 30 |
| FLORIDA | 33,240 | 53 | 100 | 25,394 | - | 2,376 | 158 | - | - | 8 | 4,584 | 557 |
| GEORGIA | 2,026 | 801 | - | 34 | - | - | - | - | - | 5 | - | 1,186 |
| MARYLAND | 20,282 | 1 | 794 | 17,553 | - | 202 | 43 | 85 | - | 108 | 1,234 | 127 |
| N CAROLINA | 3,144 | 42 | - | 150 | - | 2,631 | 20 | - | - | - | - | 301 |
| S CAROLINA | 1,754 | 23 | - | - | - | - | - | - | - | 1,572 | 114 | 43 |
| VIRGINIA | 3,549 | 27 | - | 941 | - | 1,231 | - | 102 | - | 15 | 1,111 | 82 |
| N VIRGINIA | 1,871 | 16 | - | - | - | - | 180 | - | - | - | - | 1,675 |
| E S CENTRAL | 16,787 | 338 | 9 | 1,797 | - | - | 14 | 82 | - | 12,005 | 2,412 | 130 |
| ALABAMA | 1,785 | 25 | - | 146 | - | - | - | 82 | - | - | 1,502 | 30 |
| KENTUCKY | 813 | 29 | - | 77 | - | - | - | - | - | 60 | 562 | 85 |
| MISSISSIPPI | 812 | 253 | 9 | 174 | - | - | 13 | - | - | - | 348 | 15 |
| TENNESSEE | 13,377 | 31 | - | 1,400 | - | - | 1 | - | - | 11,945 | - | - |
| W S CENTRAL | 9,364 | 553 | - | 1,242 | - | 4,100 | 1,014 | - | - | 166 | 1,598 | 691 |
| ARKANSAS | 75 | 20 | - | - | - | - | - | - | - | - | - | 55 |
| LOUISIANA | 1,089 | 21 | - | - | - | - | - | - | - | - | 818 | 250 |
| OKLAHOMA | 127 | 26 | - | - | - | - | - | - | - | - | 31 | 70 |
| TEXAS | 8,073 | 486 | - | 1,242 | - | 4,100 | 1,014 | - | - | 166 | 749 | 316 |
| MOUNTAIN | 112,367 | 172 | 110 | 21,701 | - | - | 313 | 4,118 | - | 83,686 | 334 | 933 |
| ARIZONA | 1,633 | 65 | - | 1,519 | - | - | 3 | - | - | - | - | 46 |
| COLORADO | 5,212 | 25 | 78 | 81 | - | - | 66 | 4,118 | - | 29 | 152 | 663 |
| IDAHO | 23,043 | 12 | 32 | - | - | - | 29 | - | - | 22,561 | 112 | 297 |
| MONTANA | 48 | 35 | - | - | - | - | - | - | - | - | - | 13 |
| NEVADA | 17,223 | 7 | - | 3,334 | - | - | - | - | - | 13,803 | 50 | 29 |
| NEW MEXICO | 63,606 | 11 | - | 16,062 | - | - | 115 | - | - | 47,083 | - | 335 |
| UTAH | 974 | 9 | - | 705 | - | - | 100 | - | - | 140 | 20 | - |
| WYOMING | 628 | 8 | - | - | - | - | - | - | - | 70 | - | 550 |
| PACIFIC | 104,432 | 1,146 | 2,594 | 32,768 | - | 4,698 | 595 | 46 | - | 41,016 | 16,919 | 4,650 |
| ALASKA | 459 | 8 | - | 269 | - | - | - | - | - | 17 | 66 | 99 |
| CALIFORNIA | 85,928 | 31 | 370 | 31,598 | - | 4,698 | 290 | 46 | - | 28,731 | 16,853 | 3,311 |
| HAWAII | 506 | 8 | 350 | 95 | - | - | - | - | - | 3 | - | 50 |
| OREGON | 2,269 | 1,083 | 121 | - | - | - | - | - | - | - | - | 1,065 |
| WASHINGTON | 15,270 | 16 | 1,753 | 806 | - | - | 305 | - | - | 12,265 | - | 125 |
| OUT AREAS | 3,457 | 33 | 63 | 2,317 | - | 45 | - | - | - | 11 | - | 988 |
| OFF ABROAD | 5,282 | - | - | 4,877 | - | - | - | - | - | 40 | - | 365 |

NOTE- THE OBLIGATIONS OF THE TEN MAJOR RED SUPPORTING AGENCIES INCLUDED IN THIS TABLE REPRESENT MORE THAN 98 PERCENT OF TOTAL FEDERAL RED PLANT OBLIGATIONS IN FY 1970.

TABLE C-83. FEDERAL OBLIGATIONS FOR TOTAL RESEARCH AND DEVELOPMENT TO INTRAMURAL PERFORMERS FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | | ESTIMATES | | | |
|--|--------------|-----------------|-----------|-----------------|-----------|-----------------|
| | | | 1971 | | 1972 | |
| | TOTAL | PERSONNEL COSTS | TOTAL | PERSONNEL COSTS | TOTAL | PERSONNEL COSTS |
| TOTAL, ALL AGENCIES..... | 3,875,485 | 2,389,713 | 3,928,677 | 2,497,934 | 4,135,135 | 2,556,433 |
| DEPARTMENTS | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 2,835,355 | 159,776 | 226,478 | 167,424 | 227,342 | 177,664 |
| AGRICULTURAL RESEARCH SERVICE..... | 148,673 | 111,080 | 162,651 | 116,779 | 163,734 | 127,955 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 2,700 | 2,000 | 2,292 | 2,292 | 2,447 | 2,447 |
| ECONOMIC RESEARCH SERVICE..... | 14,643 | 12,747 | 15,688 | 12,591 | 15,228 | 12,143 |
| FARMER COOPERATIVE SERVICE..... | 865 | 727 | 87 | 731 | 433 | 743 |
| FOREST SERVICE..... | 41,412 | 32,352 | 44,542 | 34,745 | 44,354 | 34,627 |
| NATIONAL AGRICULTURAL LIBRARY..... | 107 | 88 | 102 | 10 | 113 | 113 |
| STATISTICAL REPORTING SERVICE..... | 535 | 459 | 533 | 456 | 533 | 456 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 88,163 | 66,226 | 117,774 | 76,644 | 130,636 | 89,444 |
| BUREAU OF THE CENSUS..... | 2,973 | 2,733 | 4,197 | 3,267 | 3,451 | 2,675 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 1,387 | 1,129 | 1,566 | 1,256 | 1,576 | 1,252 |
| MARITIME ADMINISTRATION..... | 521 | 41 | 93 | 42 | 1,045 | 55 |
| NATIONAL BUREAU OF STANDARDS..... | 28,401 | 22,447 | 37,581 | 22,363 | 33,265 | 24,231 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 5,892 | 35,435 | 65,754 | 44,718 | 81,222 | 54,267 |
| OFFICE OF BUSINESS ECONOMICS..... | 3,555 | 2,912 | 4,774 | 3,179 | 4,504 | 3,442 |
| OFFICE OF TELECOMMUNICATIONS..... | - | - | 2,642 | 1,411 | 5,100 | 2,637 |
| PATENT OFFICE..... | 394 | 325 | 567 | 478 | 575 | 493 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,005,579 | 1,247,557 | 1,983,288 | 1,257,252 | 2,139,848 | 1,259,354 |
| BUREAU OF THE ARMY..... | 679,578 | 377,605 | 637,119 | 379,576 | 743,191 | 390,297 |
| DEPARTMENT OF THE NAVY..... | 708,546 | 456,359 | 728,841 | 472,986 | 771,125 | 467,056 |
| DEPARTMENT OF THE AIR FORCE..... | 525,547 | 341,783 | 495,644 | 341,289 | 477,604 | 324,379 |
| DEFENSE AGENCIES..... | 131,449 | 55,334 | 127,766 | 63,834 | 146,834 | 69,326 |
| DEPARTMENT OF EDUCATION, TOTAL..... | 569 | 227 | 2,918 | 1,067 | 3,000 | 1,170 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | 249,523 | 148,222 | 293,585 | 177,979 | 311,647 | 186,772 |
| FOOD AND DRUG ADMINISTRATION..... | 13,35 | 11,214 | 14,824 | 12,452 | 27,249 | 17,709 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 47,531 | 34,273 | 55,428 | 47,915 | 54,590 | 37,425 |
| NATIONAL INSTITUTES OF HEALTH..... | 165,577 | 93,791 | 274,249 | 115,677 | 214,264 | 121,476 |
| OFFICE OF CHILD DEVELOPMENT..... | 100 | 90 | 275 | 215 | 667 | 495 |
| OFFICE OF EDUCATION..... | 4,433 | 3,492 | 4,787 | 3,546 | 5,319 | 4,127 |
| SOCIAL AND REHABILITATION SERVICE..... | 1,744 | 845 | 1,657 | 955 | 1,732 | 825 |
| SOCIAL SECURITY ADMINISTRATION..... | 12,747 | 4,202 | 12,654 | 4,326 | 12,333 | 4,335 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP. | 3,777 | 2,785 | 6,135 | 4,600 | 5,685 | 4,124 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 1,774,411 | 727,146 | 1,776,776 | 777,931 | 1,146,627 | 82,841 |
| BUREAU OF LAND MANAGEMENT..... | 833 | 632 | 1,390 | 1,110 | 1,423 | 1,167 |
| BUREAU OF MINING..... | 372 | 263 | 431 | 340 | 472 | 380 |
| BUREAU OF CONSERVATION..... | 47,653 | 31,771 | 43,349 | 33,600 | 47,060 | 35,300 |
| BUREAU OF RECLAMATION..... | 2,835 | 1,701 | 3,511 | 2,116 | 3,431 | 2,159 |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 11,259 | 4,132 | 12,753 | 5,069 | 13,257 | 5,231 |
| GEOLOGICAL SURVEY..... | 47,651 | 37,647 | 41,599 | 31,915 | 43,678 | 33,500 |
| OFFICE OF COAL RESEARCH..... | 362 | 317 | 277 | 180 | 200 | 187 |
| OFFICE OF SALINE WATER..... | 3,444 | 2,827 | 3,510 | 2,963 | 3,510 | 2,967 |
| OFFICE OF THE SECRETARY..... | - | - | 45 | 45 | 90 | 90 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 657 | 554 | 805 | 638 | 923 | 751 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,739 | 922 | 1,645 | 892 | 2,402 | 1,751 |
| BUREAU OF NAUTICS AND HYDROGRAPHICS..... | 75 | 25 | 30 | 8 | 63 | 13 |

CONTINUED

OTHER AGENCIES

TABLE C-89. FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO INTRAMURAL PERFORMERS
FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | | | | ESTIMATES | | | |
|---|--------------|-----------------|---------|-----------|-----------------|---------|-----------|-----------------|
| | | | | | 1971 | | | |
| | TOTAL | PERSONNEL COSTS | PERCENT | TOTAL | PERSONNEL COSTS | PERCENT | TOTAL | PERSONNEL COSTS |
| TOTAL, ALL AGENCIES..... | 658,284 | 392,349 | 59.6 | 669,135 | 415,939 | 62.1 | 764,856 | 441,777 |
| DEPARTMENTS | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 45,437 | 64,953 | 76.7 | 91,249 | 67,134 | 73.5 | 96,619 | 67,664 |
| AGRICULTURAL RESEARCH SERVICE..... | 66,858 | 51,797 | 74.9 | 71,250 | 51,236 | 71.9 | 71,767 | 52,174 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 75 | 793 | 105.6 | 871 | 871 | 100.0 | 930 | 930 |
| FOREST SERVICE..... | 4,259 | 5,492 | 81.9 | 4,492 | 3,594 | 80.0 | 4,416 | 3,533 |
| FOREST SERVICE..... | 221 | 186 | 84.1 | 236 | 194 | 83.8 | 236 | 194 |
| FOREST SERVICE..... | 13,264 | 11,345 | 78.0 | 14,368 | 11,201 | 78.0 | 13,930 | 11,865 |
| STATISTICAL REPORTING SERVICE..... | 45 | 39 | 86.6 | 40 | 34 | 85.0 | 40 | 34 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 35,876 | 25,988 | 72.4 | 45,512 | 31,284 | 68.7 | 53,712 | 36,726 |
| BUREAU OF THE CENSUS..... | 243 | 184 | 75.7 | 344 | 239 | 69.4 | 421 | 297 |
| NATIONAL BUREAU OF STANDARDS..... | 13,982 | 11,016 | 78.7 | 14,591 | 10,675 | 73.1 | 14,880 | 10,440 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 18,146 | 11,976 | 65.9 | 24,415 | 16,114 | 66.0 | 29,772 | 19,650 |
| OFFICE OF BUSINESS ECONOMICS..... | 3,505 | 2,812 | 80.2 | 4,004 | 3,109 | 77.5 | 4,508 | 3,442 |
| OFFICE OF TELECOMMUNICATIONS..... | - | - | - | 2,158 | 1,152 | 53.3 | 3,531 | 1,857 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 95,646 | 55,248 | 58.0 | 101,169 | 67,677 | 66.8 | 103,663 | 68,513 |
| DEPARTMENT OF THE ARMY..... | 28,291 | 21,546 | 76.1 | 28,720 | 21,291 | 73.9 | 27,287 | 21,093 |
| DEPARTMENT OF THE NAVY..... | 30,233 | 19,470 | 64.3 | 31,534 | 20,371 | 64.6 | 31,902 | 20,533 |
| DEPARTMENT OF THE AIR FORCE..... | 36,674 | 23,722 | 64.8 | 40,509 | 25,351 | 62.5 | 43,794 | 26,479 |
| DEFENSE AGENCIES..... | 518 | 310 | 59.8 | 1,106 | 664 | 60.0 | 680 | 408 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 113,661 | 66,953 | 58.9 | 134,049 | 78,591 | 58.6 | 160,275 | 98,496 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 18,177 | 12,663 | 69.6 | 18,429 | 12,860 | 69.7 | 19,714 | 13,264 |
| NATIONAL INSTITUTES OF HEALTH..... | 94,783 | 53,650 | 56.6 | 114,877 | 65,220 | 56.5 | 143,366 | 84,420 |
| OFFICE OF EDUCATION..... | 298 | 237 | 79.5 | 358 | 286 | 79.8 | 415 | 332 |
| SOCIAL SECURITY ADMINISTRATION..... | 403 | 403 | 100.0 | 425 | 425 | 100.0 | 480 | 480 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 39,797 | 28,735 | 72.2 | 39,912 | 29,012 | 72.6 | 41,379 | 30,147 |
| BUREAU OF MINES..... | 5,727 | 4,470 | 76.8 | 5,457 | 4,200 | 76.9 | 6,186 | 4,800 |
| BUREAU OF RECLAMATION..... | 32 | 19 | 59.3 | 24 | 14 | 58.3 | 20 | 12 |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 3,567 | 2,567 | 71.9 | 4,146 | 1,565 | 37.7 | 4,257 | 1,624 |
| GEOLOGICAL SURVEY..... | 3,324 | 23,228 | 76.5 | 30,099 | 23,085 | 76.6 | 30,704 | 23,549 |
| OFFICE OF SALINE WATER..... | 10 | 8 | 80.0 | 10 | 8 | 80.0 | 10 | 8 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 144 | 122 | 84.7 | 176 | 140 | 79.5 | 232 | 154 |
| DEPARTMENT OF LABOR, TOTAL..... | 1,787 | 1,296 | 72.5 | 2,268 | 1,656 | 73.0 | 2,371 | 1,728 |
| BUREAU OF LABOR STATISTICS..... | 1,422 | 974 | 68.4 | 1,461 | 942 | 64.5 | 1,463 | 942 |
| LABOR-MANAGEMENT SERVICES ADMIN..... | 290 | 251 | 86.5 | 720 | 581 | 80.6 | 812 | 645 |
| MANPOWER ADMINISTRATION..... | 75 | 71 | 94.6 | 87 | 83 | 95.4 | 96 | 91 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 1,343 | 6,440 | 52.1 | 12,649 | 5,822 | 53.9 | 13,276 | 10,728 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,256 | 1,193 | 94.9 | 1,099 | 1,044 | 94.9 | 1,286 | 1,222 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMIN. | 5 | 5 | 100.0 | 5 | 5 | 100.0 | 5 | 5 |
| UNITED STATES COAST GUARD..... | 11,180 | 5,240 | 47.2 | 11,542 | 5,771 | 50.0 | 11,983 | 8,799 |
| URBAN MASS TRANSPORTATION ADMIN..... | 2 | 2 | 100.0 | 2 | 2 | 100.0 | 2 | 2 |
| OTHER AGENCIES | | | | | | | | |
| ATOMIC ENERGY COMMISSION..... | 922 | 531 | 57.5 | 587 | 332 | 56.5 | 456 | 255 |
| CIVIL SERVICE COMMISSION..... | 84 | 83 | 97.6 | 176 | 176 | 100.0 | 113 | 113 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 50 | 40 | 80.0 | 50 | 40 | 80.0 | 75 | 60 |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 238,656 | 1,942,220 | 81.4 | 1,988,372 | 1,000,511 | 50.3 | 1,494,429 | 92,437 |
| NATIONAL SCIENCE FOUNDATION..... | 11,200 | 6,677 | 59.6 | 17,660 | 14,782 | 79.7 | 18,711 | 14,260 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 600 | 540 | 90.0 | 960 | 960 | 100.0 | 2,200 | 2,100 |
| SMITHSONIAN INSTITUTION..... | 377 | 221 | 58.4 | 396 | 236 | 59.5 | 432 | 257 |
| VETERANS ADMINISTRATION..... | 16,634 | 12,748 | 76.6 | 18,842 | 13,534 | 71.8 | 23,985 | 15,089 |
| | 5,180 | 3,839 | 74.1 | 5,315 | 3,992 | 75.1 | 5,510 | 4,274 |

TABLE C-90. FEDERAL OBLIGATIONS FOR APPLIED RESEARCH TO INTRAMURAL PERFORMERS
FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | | | ESTIMATES | | | |
|---|--------------|-----------------|---------|-----------|-----------------|-----------|-----------------|
| | TOTAL | PERSONNEL COSTS | PERCENT | 1971 | | 1972 | |
| | | | | TOTAL | PERSONNEL COSTS | TOTAL | PERSONNEL COSTS |
| TOTAL, ALL AGENCIES..... | 1,374,569 | 856,728 | 62.2 | 1,432,859 | 904,567 | 1,518,531 | 954,435 |
| DEPARTMENTS | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 114,655 | 87,203 | 76.0 | 125,604 | 93,089 | 126,682 | 95,371 |
| AGRICULTURAL RESEARCH SERVICE..... | 74,617 | 55,207 | 73.9 | 82,908 | 59,171 | 83,727 | 61,228 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 1,290 | 1,291 | 100.0 | 1,421 | 1,421 | 1,517 | 1,517 |
| ECONOMIC RESEARCH SERVICE..... | 10,424 | 8,548 | 82.0 | 17,996 | 8,797 | 17,812 | 8,650 |
| FARMER COOPERATIVE SERVICE..... | 644 | 541 | 84.0 | 634 | 533 | 697 | 585 |
| FOREST SERVICE..... | 27,292 | 21,288 | 78.0 | 29,265 | 22,820 | 29,538 | 23,740 |
| NATIONAL AGRICULTURAL LIBRARY..... | 107 | 88 | 82.0 | 102 | 102 | 113 | 113 |
| STATISTICAL REPORTING SERVICE..... | 291 | 241 | 83.0 | 278 | 238 | 278 | 238 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 40,301 | 29,160 | 72.3 | 52,361 | 36,321 | 62,542 | 42,623 |
| BUREAU OF THE CENSUS..... | 1,357 | 866 | 63.8 | 1,759 | 1,383 | 1,498 | 1,154 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 524 | 451 | 86.0 | 664 | 555 | 666 | 555 |
| MARITIME ADMINISTRATION..... | 515 | 35 | 6.7 | 888 | 30 | 845 | 45 |
| NATIONAL BUREAU OF STANDARDS..... | 12,294 | 9,686 | 78.7 | 13,497 | 9,870 | 14,887 | 11,845 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 25,327 | 17,882 | 70.6 | 34,614 | 23,830 | 42,707 | 28,847 |
| OFFICE OF TELECOMMUNICATIONS..... | - | - | - | 484 | 250 | 1,469 | 773 |
| PATENT OFFICE..... | 284 | 240 | 84.5 | 455 | 389 | 470 | 404 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 486,575 | 316,353 | 65.0 | 456,727 | 311,299 | 497,639 | 316,398 |
| DEPARTMENT OF THE ARMY..... | 184,532 | 122,990 | 66.5 | 156,692 | 122,468 | 180,728 | 123,729 |
| DEPARTMENT OF THE NAVY..... | 126,722 | 81,629 | 64.4 | 122,697 | 77,324 | 132,058 | 78,815 |
| DEPARTMENT OF THE AIR FORCE..... | 95,179 | 72,620 | 76.2 | 96,457 | 72,539 | 102,600 | 73,907 |
| DEFENSE AGENCIES..... | 79,573 | 39,007 | 49.0 | 80,463 | 38,800 | 81,773 | 39,754 |
| DEPARTMENT OF DEFENSE FUNDS..... | 569 | 227 | 39.8 | 418 | 167 | 500 | 200 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 122,047 | 76,295 | 62.5 | 147,543 | 91,055 | 137,861 | 78,269 |
| FOOD AND DRUG ADMINISTRATION..... | 13,350 | 11,214 | 84.0 | 14,824 | 12,452 | 20,249 | 17,079 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 26,940 | 20,122 | 74.7 | 28,974 | 22,849 | 29,607 | 19,085 |
| NATIONAL INSTITUTES OF HEALTH..... | 70,112 | 39,610 | 56.4 | 88,672 | 50,100 | 73,055 | 36,310 |
| OFFICE OF CHILD DEVELOPMENT..... | 50 | 40 | 80.0 | 100 | 80 | 140 | 100 |
| OFFICE OF EDUCATION..... | 953 | 717 | 75.2 | 1,427 | 858 | 1,475 | 1,070 |
| SOCIAL AND REHABILITATION SERVICE..... | 998 | 800 | 80.1 | 1,017 | 815 | 982 | 785 |
| SOCIAL SECURITY ADMINISTRATION..... | 11,644 | 3,799 | 32.6 | 12,529 | 3,971 | 12,353 | 3,905 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP. | 50 | 45 | 90.0 | 50 | 45 | 50 | 45 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 45,923 | 32,854 | 71.5 | 51,953 | 37,414 | 53,082 | 37,822 |
| BONNEVILLE POWER ADMINISTRATION..... | 134 | 78 | 58.2 | 137 | 70 | 98 | 73 |
| BUREAU OF LAND MANAGEMENT..... | 350 | 280 | 80.0 | 407 | 320 | 448 | 360 |
| BUREAU OF MINES..... | 26,213 | 20,000 | 76.2 | 28,899 | 22,500 | 27,655 | 21,300 |
| BUREAU OF OUTDOOR RECREATION..... | 92 | 85 | 92.3 | 83 | 75 | 76 | 70 |
| BUREAU OF RECLAMATION..... | 2,695 | 1,617 | 60.0 | 3,384 | 2,030 | 3,796 | 2,278 |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 5,732 | 2,528 | 44.1 | 6,581 | 2,828 | 6,946 | 2,935 |
| GEOLOGICAL SURVEY..... | 9,677 | 7,612 | 78.5 | 11,500 | 8,820 | 12,974 | 9,951 |
| OFFICE OF COAL RESEARCH..... | 300 | 250 | 83.3 | 100 | 90 | 100 | 90 |
| OFFICE OF SALINE WATER..... | 224 | 168 | 75.0 | 200 | 150 | 200 | 150 |
| OFFICE OF THE SECRETARY..... | - | - | - | 33 | 33 | 68 | 68 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 506 | 436 | 86.1 | 629 | 498 | 721 | 547 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 301 | 250 | 83.0 | 327 | 235 | 1,005 | 706 |
| BUREAU OF NARCOTICS AND DANGEROUS DRUGS | 25 | 25 | 100.0 | 39 | 8 | 63 | 13 |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 276 | 225 | 81.5 | 288 | 227 | 942 | 693 |

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TABLE C-91- FEDERAL OBLIGATIONS FOR DEVELOPMENT TO INTRAMURAL PERFORMERS
FOR PERSONNEL COSTS, BY AGENCY, FISCAL YEAR 1970, 1971, 1972
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | | | ESTIMATES | | | |
|---|--------------|-----------------|---------|-----------|-----------------|-----------|-----------------|
| | | | | 1971 | | 1972 | |
| | TOTAL | PERSONNEL COSTS | PERCENT | TOTAL | PERSONNEL COSTS | TOTAL | PERSONNEL COSTS |
| TOTAL, ALL AGENCIES..... | 1,842,692 | 1,141,336 | 61.9 | 1,826,683 | 1,177,432 | 1,915,798 | 1,167,221 |
| DEPARTMENTS | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 8,263 | 6,623 | 80.1 | 9,625 | 7,201 | 13,081 | 7,629 |
| AGRICULTURAL RESEARCH SERVICE..... | 7,199 | 5,776 | 80.2 | 8,493 | 6,372 | 8,940 | 6,723 |
| FOREST SERVICE..... | 856 | 668 | 78.0 | 917 | 715 | 926 | 722 |
| STATISTICAL REPORTING SERVICE..... | 209 | 179 | 85.6 | 215 | 184 | 215 | 184 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 11,986 | 9,078 | 75.7 | 12,831 | 9,039 | 15,082 | 11,395 |
| BUREAU OF THE CENSUS..... | 1,373 | 988 | 71.9 | 2,094 | 1,645 | 1,631 | 1,284 |
| ECONOMIC DEVELOPMENT ADMINISTRATION..... | 863 | 677 | 78.4 | 902 | 701 | 910 | 697 |
| MARITIME ADMINISTRATION..... | 6 | 6 | 100.0 | 12 | 12 | 200 | 10 |
| NATIONAL BUREAU OF STANDARDS..... | 2,215 | 1,745 | 78.7 | 2,493 | 1,823 | 3,493 | 2,545 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 7,419 | 5,577 | 75.1 | 7,225 | 4,769 | 8,743 | 5,770 |
| PATENT OFFICE..... | 110 | 85 | 77.2 | 105 | 89 | 105 | 89 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 1,413,358 | 859,156 | 60.7 | 1,425,392 | 878,277 | 1,538,546 | 874,443 |
| DEPARTMENT OF THE ARMY..... | 416,685 | 233,169 | 55.9 | 452,407 | 235,917 | 533,196 | 251,471 |
| DEPARTMENT OF THE NAVY..... | 551,551 | 355,237 | 64.4 | 574,610 | 373,191 | 677,169 | 368,338 |
| DEPARTMENT OF THE AIR FORCE..... | 344,164 | 244,741 | 71.1 | 349,678 | 243,365 | 331,300 | 224,000 |
| DEFENSE AGENCIES..... | 5,958 | 26,016 | 51.0 | 46,197 | 24,370 | 64,381 | 29,164 |
| DEPARTMENT-WIDE FUNDS..... | - | - | - | 2,500 | 1,500 | 2,500 | 1,500 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 17,875 | 4,974 | 27.8 | 11,953 | 8,333 | 12,911 | 9,307 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | 6,414 | 1,418 | 22.1 | 8,026 | 5,206 | 8,065 | 5,476 |
| NATIONAL INSTITUTES OF HEALTH..... | 682 | 531 | 77.8 | 700 | 550 | 843 | 676 |
| OFFICE OF CHILD DEVELOPMENT..... | 50 | 40 | 80.0 | 175 | 135 | 520 | 390 |
| OFFICE OF EDUCATION..... | 3,679 | 2,943 | 80.0 | 3,002 | 2,402 | 3,429 | 2,725 |
| SOCIAL AND REHABILITATION SERVICE..... | 50 | 40 | 80.0 | 50 | 40 | 50 | 40 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP. | 3,654 | 2,747 | 74.9 | 6,085 | 4,564 | 5,439 | 4,079 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 14,681 | 10,557 | 71.9 | 15,811 | 11,505 | 20,159 | 14,872 |
| BONNEVILLE POWER ADMINISTRATION..... | 699 | 524 | 74.9 | 1,253 | 940 | 1,325 | 994 |
| BUREAU OF LAND MANAGEMENT..... | 22 | 18 | 81.8 | 24 | 20 | 24 | 20 |
| BUREAU OF MINES..... | 8,713 | 6,600 | 75.7 | 8,903 | 6,900 | 13,219 | 10,200 |
| BUREAU OF RECLAMATION..... | 109 | 65 | 60.1 | 103 | 62 | 115 | 69 |
| BUREAU OF SPORT FISHERIES & WILDLIFE..... | 1,967 | 646 | 32.8 | 2,026 | 676 | 2,054 | 672 |
| OFFICE OF COAL RESEARCH..... | 62 | 60 | 96.7 | 100 | 90 | 100 | 90 |
| OFFICE OF SALINE WATER..... | 3,110 | 2,644 | 85.0 | 3,300 | 2,805 | 3,300 | 2,805 |
| OFFICE OF THE SECRETARY..... | - | - | - | 12 | 12 | 22 | 22 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 738 | 672 | 91.0 | 718 | 657 | 1,397 | 1,045 |
| BUREAU OF PRISONS..... | 160 | 120 | 75.0 | 140 | 100 | 220 | 160 |
| FEDERAL BUREAU OF INVESTIGATION..... | 115 | 115 | 100.0 | 115 | 115 | 115 | 115 |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 463 | 437 | 94.3 | 463 | 437 | 1,062 | 770 |
| DEPARTMENT OF LABOR, TOTAL..... | 3,021 | 2,808 | 92.9 | 3,534 | 3,302 | 3,587 | 3,352 |
| BUREAU OF LABOR STATISTICS..... | 1,249 | 1,125 | 90.0 | 1,152 | 1,039 | 1,152 | 1,039 |
| MANPOWER ADMINISTRATION..... | 1,772 | 1,683 | 94.9 | 2,382 | 2,263 | 2,435 | 2,313 |
| POSTAL SERVICE..... | 5,865 | 5,280 | 90.0 | 5,745 | 5,214 | 12,050 | 10,680 |

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THOUSANDS OF DOLLARS)

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Table C-92. Federal expenditures for research, development, and R&D plant, by agency, fiscal years 1940-1972

(Millions of dollars)

| Agency | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 |
|--|------|-------|-------|-------|---------|---------|-------|-------|-------|---------|---------|
| Total, all agencies | 74.1 | 197.9 | 280.3 | 602.4 | 1,377.2 | 1,590.7 | 917.8 | 899.9 | 854.8 | 1,082.0 | 1,082.8 |
| Departments | | | | | | | | | | | |
| Department of Agriculture | 29.1 | 28.3 | 29.9 | 30.7 | 32.1 | 33.7 | 36.8 | 39.2 | 42.4 | 50.5 | 53.0 |
| Department of Commerce ^a | 3.3 | 3.1 | 3.2 | 5.2 | 5.2 | 5.0 | 5.0 | 4.8 | 8.2 | 12.5 | 12.0 |
| Department of Defense, Total | 26.4 | 143.7 | 211.1 | 395.1 | 448.1 | 513.0 | 418.0 | 550.8 | 592.2 | 695.4 | 652.3 |
| Department of the Army ^b | 3.8 | 18.7 | 68.4 | 149.0 | 161.3 | 134.0 | 114.0 | 100.0 | 116.4 | 136.6 | 123.1 |
| Department of the Navy ^b | 13.9 | 24.6 | 58.9 | 130.5 | 176.6 | 243.0 | 183.0 | 293.8 | 287.5 | 332.9 | 310.8 |
| Department of the Air Force ^b | 8.7 | 100.4 | 83.8 | 115.6 | 110.2 | 136.0 | 121.0 | 157.0 | 188.3 | 225.9 | 218.4 |
| Advanced Research Projects Agency ^c | | | | | | | | | | | |
| Departmentwide Funds ^c | | | | | | | | | | | |
| Defense Agencies ^c | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^d | 2.8 | 3.0 | 3.2 | 3.2 | 3.3 | 3.4 | 3.5 | 10.1 | 22.8 | 27.9 | 39.6 |
| Department of the Interior | 7.9 | 9.5 | 13.5 | 17.0 | 20.7 | 18.0 | 17.0 | 20.3 | 31.4 | 38.2 | 32.1 |
| Department of Transportation ^a | | | | | | | | | | | |
| Other Agencies | | | | | | | | | | | |
| Atomic Energy Commission | | | | | | | | 37.7 | 107.5 | 196.1 | 221.4 |
| Environmental Protection Agency | | | | | | | | | | | |
| Federal Aviation Agency ^a | | | | | | | | | | | |
| Manhattan Engineer District ^e | | | | 77.0 | 730.0 | 859.0 | 366.0 | 186.0 | | | |
| National Aeronautics and Space Administration ^f | 2.2 | 2.6 | 5.0 | 9.8 | 18.4 | 24.1 | 23.7 | 35.2 | 37.5 | 48.7 | 54.5 |
| National Science Foundation | | | | | | | | | | | |
| Office of Economic Opportunity | | | | | | | | | | | |
| Office of Scientific Research and Development | | 5.3 | 11.0 | 52.2 | 86.8 | 114.5 | 36.8 | 5.6 | .9 | | |
| Veterans Administration | | | | | | | | | | | |
| All Other Agencies | 2.4 | 2.4 | 3.4 | 12.2 | 32.6 | 20.0 | 11.0 | 10.2 | 11.8 | 12.8 | 17.7 |

| Agency | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total, all agencies | 1,300.5 | 1,816.2 | 3,101.0 | 3,147.9 | 3,308.3 | 3,446.0 | 4,461.9 | 4,990.6 | 5,806.4 | 7,744.2 | 9,287.0 |
| Departments | | | | | | | | | | | |
| Department of Agriculture | 52.4 | 57.1 | 54.9 | 55.4 | 72.0 | 87.7 | 97.0 | 111.8 | 124.7 | 131.4 | 147.7 |
| Department of Commerce ^a | 16.9 | 10.1 | 13.6 | 10.6 | 9.9 | 20.4 | 19.8 | 17.8 | 30.1 | 33.1 | 35.5 |
| Department of Defense, Total | 823.4 | 1,317.0 | 2,454.8 | 2,487.2 | 2,630.2 | 2,639.0 | 3,371.4 | 3,664.2 | 4,183.3 | 5,653.8 | 6,618.1 |
| Department of the Army ^b | 161.6 | 318.0 | 743.3 | 815.7 | 1,012.8 | 702.4 | 782.1 | 873.5 | 890.9 | 1,108.9 | 1,306.0 |
| Department of the Navy ^b | 363.8 | 476.0 | 678.3 | 664.7 | 591.9 | 635.8 | 784.9 | 854.1 | 1,034.7 | 1,300.6 | 1,631.0 |
| Department of the Air Force ^b | 297.9 | 523.0 | 1,033.2 | 1,006.8 | 982.2 | 1,278.9 | 1,780.0 | 1,894.0 | 2,134.5 | 2,978.0 | 3,440.6 |
| Advanced Research Projects Agency ^c | | | | | | | | 3.0 | 80.9 | 226.3 | 206.6 |
| Departmentwide Funds ^c | | | | | 43.3 | 21.9 | 24.4 | 39.6 | 42.3 | 40.0 | 33.9 |
| Defense Agencies ^c | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^d | 53.4 | 64.1 | 65.2 | 62.5 | 70.2 | 86.2 | 143.5 | 180.3 | 252.8 | 324.2 | 374.1 |
| Department of the Interior | 32.1 | 32.8 | 32.2 | 39.1 | 31.9 | 35.7 | 42.3 | 48.9 | 72.2 | 65.3 | 75.1 |
| Department of Transportation ^a | | | | | | | | | | | |
| Other Agencies | | | | | | | | | | | |
| Atomic Energy Commission | 242.6 | 249.6 | 378.1 | 383.1 | 385.4 | 474.0 | 656.5 | 804.2 | 877.1 | 985.9 | 1,111.1 |
| Environmental Protection Agency | | | | | | | | 4.2 | 27.6 | 41.2 | 52.9 |
| Federal Aviation Agency ^a | | | | | | | | | | | |
| Manhattan Engineer District ^e | | | | | | | | | | | |
| National Aeronautics and Space Administration ^f | 61.6 | 67.4 | 78.6 | 89.5 | 73.8 | 71.1 | 76.1 | 89.2 | 145.5 | 401.0 | 744.3 |
| National Science Foundation | .1 | .5 | 2.1 | 3.6 | 8.5 | 15.4 | 30.6 | 33.7 | 54.1 | 64.2 | 82.7 |
| Office of Economic Opportunity | | | | | | | | | | | |
| Office of Scientific Research and Development | | | | | | | | | | | |
| Veterans Administration | | 3.3 | 4.6 | 5.1 | 5.3 | 6.1 | 9.4 | 12.8 | 16.8 | 18.6 | 23.1 |
| All Other Agencies | 18.7 | 14.3 | 13.9 | 11.8 | 21.1 | 10.4 | 15.3 | 23.5 | 22.2 | 25.4 | 22.6 |

See footnotes at end of table.

Table C-92. Federal expenditures for research, development, and R&D plant, by agency, fiscal years 1940-1972—Continued

(Millions of dollars)

| Agency | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates | |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|
| | | | | | | | | | | 1971 | 1972 |
| Total, all agencies | 10,386.8 | 12,012.1 | 14,707.0 | 14,888.8 | 16,017.9 | 16,859.1 | 17,048.9 | 16,347.6 | 15,735.8 | 15,988.2 | 16,314.8 |
| Departments | | | | | | | | | | | |
| Department of Agriculture | 155.7 | 172.5 | 183.4 | 205.7 | 236.3 | 269.8 | 286.2 | 283.8 | 298.6 | 316.2 | 322.0 |
| Department of Commerce ^a | 47.5 | 70.4 | 84.5 | 85.8 | 71.2 | 80.5 | 81.6 | 78.4 | 127.9 | 144.5 | 163.0 |
| Department of Defense, Total | 6,812.0 | 6,848.8 | 7,517.0 | 6,727.6 | 6,734.6 | 7,680.1 | 8,163.6 | 7,868.4 | 7,587.9 | 7,726.8 | 7,912.8 |
| Department of the Army ^b | 1,243.5 | 1,421.2 | 1,413.6 | 1,428.9 | 1,485.2 | 1,734.0 | 1,539.5 | 1,609.8 | 1,771.6 | 1,767.1 | 1,893.6 |
| Department of the Navy ^b | 1,561.0 | 1,573.6 | 1,724.2 | 1,419.4 | 1,548.6 | 1,941.9 | 2,104.1 | 2,108.8 | 2,172.4 | 2,271.0 | 2,351.5 |
| Department of the Air Force ^b | 3,672.9 | 3,539.1 | 3,951.1 | 3,404.8 | 3,194.2 | 3,487.0 | 3,987.8 | 3,626.3 | 3,150.1 | 3,173.5 | 3,139.2 |
| Advanced Research Projects Agency ^c | 192.9 | 14.6 | 21.1 | 9.9 | 9.9 | 9.9 | 7.2 | 9.2 | 5.9 | 19.6 | 48.8 |
| Departmentwide Funds ^c | 141.7 | 300.4 | 406.9 | 464.7 | 496.7 | 507.3 | 525.0 | 514.2 | 488.0 | 495.7 | 479.6 |
| Defense Agencies ^c | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^d | 512.1 | 632.4 | 793.4 | 737.9 | 879.4 | 1,075.0 | 1,283.1 | 1,220.0 | 1,261.3 | 1,390.4 | 1,538.0 |
| Department of the Interior | 86.7 | 102.7 | 102.0 | 118.8 | 149.3 | 166.7 | 195.1 | 204.2 | 159.8 | 193.6 | 208.7 |
| Department of Transportation ^a | | | | | 165.7 | 239.3 | 219.1 | 208.0 | 262.6 | 416.2 | 561.0 |
| Other Agencies | | | | | | | | | | | |
| Atomic Energy Commission | 1,284.3 | 1,335.6 | 1,505.0 | 1,520.0 | 1,461.9 | 1,466.9 | 1,594.3 | 1,654.0 | 1,616.0 | 1,618.9 | 1,523.0 |
| Environmental Protection Agency | 53.7 | 74.7 | 74.0 | 96.4 | | | | | 70.2 | 91.5 | 111.1 |
| Federal Aviation Agency | | | | | | | | | | | |
| Manhattan Engineer District ^e | | | | | | | | | | | |
| National Aeronautics and Space Administration ^f | | | | | | | | | | | |
| National Science Foundation | 1,257.0 | 2,552.3 | 4,171.0 | 5,092.9 | 5,933.0 | 5,425.7 | 4,723.7 | 4,251.7 | 3,753.1 | 3,368.9 | 3,152.4 |
| Office of Economic Opportunity | 112.6 | 153.1 | 202.9 | 206.3 | 240.9 | 294.8 | 333.6 | 342.3 | 324.1 | 359.7 | 430.6 |
| Office of Scientific Research and Development | | | | 4.2 | 49.4 | 36.7 | 41.0 | 77.1 | 79.3 | 90.8 | 95.0 |
| Veterans Administration | 30.8 | 33.1 | 34.1 | 40.4 | 42.2 | 46.4 | 47.4 | 54.0 | 61.7 | 67.0 | 71.7 |
| All Other Agencies | 34.3 | 36.5 | 39.7 | 52.5 | 54.1 | 77.2 | 80.2 | 105.7 | 133.3 | 203.7 | 225.5 |

^a The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

^b Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

^c Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency.

^d With the exception of ARPA, these agencies were previously included in departmentwide funds. Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Funds only.

^e Federal Security Agency prior to fiscal year 1952.

^f This agency, under the Department of War, is shown separately to identify funds for this atomic energy project from other R&D funds.

Sources: National Science Foundation and Bureau of the Budget (prior to 1952).

Table C-93. Federal expenditures for research and development, by agency, fiscal years 1952-72

(Millions of dollars)

| Agency | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total, all agencies | 1,548.2 | 2,825.6 | 2,884.6 | 3,100.1 | 3,231.9 | 4,118.9 | 4,648.4 | 5,459.3 | 7,300.4 | 8,747.9 | 9,831.6 |
| Departments | | | | | | | | | | | |
| Department of Agriculture | 56.9 | 54.8 | 54.5 | 68.9 | 82.7 | 95.5 | 108.9 | 117.7 | 120.6 | 141.3 | 151.2 |
| Department of Commerce ^a | 8.9 | 12.2 | 8.0 | 8.9 | 20.2 | 18.2 | 17.5 | 28.4 | 29.7 | 32.0 | 38.1 |
| Department of Defense, Total | 1,167.0 | 2,299.2 | 2,342.0 | 2,519.7 | 2,519.0 | 3,193.3 | 3,528.4 | 4,094.4 | 5,553.0 | 6,501.4 | 6,720.0 |
| Department of the Army ^b | 283.0 | 712.2 | 785.2 | 985.2 | 682.4 | 766.9 | 856.5 | 878.3 | 1,066.2 | 1,253.8 | 1,226.4 |
| Department of the Navy ^b | 461.0 | 642.0 | 634.7 | 581.3 | 625.8 | 767.3 | 820.2 | 1,003.1 | 1,277.0 | 1,604.5 | 1,537.5 |
| Department of the Air Force ^b | 423.0 | 945.0 | 922.1 | 909.9 | 1,188.9 | 1,634.7 | 1,809.1 | 2,092.7 | 2,958.2 | 3,420.6 | 3,632.9 |
| Advanced Research Project Agency ^c | | | | | | | 3.0 | 78.0 | 211.7 | 188.7 | 181.5 |
| Departmentwide Funds ^c | | | | 43.3 | 21.9 | 24.4 | 39.6 | 42.3 | 40.0 | 33.9 | 141.7 |
| Defense Agencies ^c | | | | | | | | | | | |
| Department of Health, Education, and Welfare | 47.9 | 47.7 | 53.3 | 66.0 | 83.4 | 137.0 | 166.8 | 227.2 | 291.8 | 343.5 | 476.0 |
| Department of the Interior | 29.8 | 31.9 | 36.0 | 31.4 | 35.2 | 42.2 | 48.7 | 69.1 | 63.1 | 71.2 | 80.3 |
| Department of Transportation ^a | | | | | | | | | | | |
| Other Agencies | | | | | | | | | | | |
| Atomic Energy Commission ^d | 168.8 | 309.9 | 323.4 | 327.3 | 410.8 | 528.0 | 644.0 | 699.8 | 761.7 | 850.2 | 1,029.2 |
| Environmental Protection Agency | | | | | | | | | | | |
| Federal Aviation Agency | | | | | | | 4.2 | 24.1 | 38.2 | 48.4 | 46.2 |
| National Aeronautics and Space Administration ^d | 50.9 | 49.5 | 47.5 | 43.4 | 50.5 | 55.2 | 72.0 | 120.7 | 346.6 | 646.1 | 1,142.7 |
| National Science Foundation | .5 | 2.1 | 3.6 | 8.3 | 13.9 | 27.0 | 29.4 | 45.3 | 57.6 | 71.3 | 92.1 |
| Office of Economic Opportunity | | | | | | | | | | | |
| Veterans Administration | 3.3 | 4.6 | 5.1 | 5.3 | 6.1 | 7.3 | 10.0 | 12.9 | 14.6 | 22.1 | 27.4 |
| All Other Agencies | 14.2 | 13.8 | 10.9 | 21.0 | 10.3 | 15.2 | 18.6 | 19.7 | 23.5 | 20.4 | 28.4 |

| Agency | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Total, all agencies | 11,338.5 | 13,758.9 | 13,811.4 | 14,970.2 | 16,073.0 | 16,333.0 | 15,695.4 | 15,157.0 | 15,327.0 | 15,673.0 |
| Departments | | | | | | | | | | |
| Department of Agriculture | 164.1 | 178.4 | 199.6 | 228.4 | 253.5 | 262.5 | 270.1 | 285.0 | 306.3 | 311.4 |
| Department of Commerce ^a | 48.4 | 53.4 | 58.1 | 52.6 | 68.7 | 75.4 | 75.1 | 122.9 | 137.9 | 157.4 |
| Department of Defense, Total | 6,793.7 | 7,432.9 | 6,627.8 | 6,680.1 | 7,606.5 | 7,990.1 | 7,660.5 | 7,447.1 | 7,563.6 | 7,758.7 |
| Department of the Army ^b | 1,406.2 | 1,394.8 | 1,408.7 | 1,473.1 | 1,709.4 | 1,495.5 | 1,577.3 | 1,753.5 | 1,720.7 | 1,855.6 |
| Department of the Navy ^b | 1,564.8 | 1,715.1 | 1,396.9 | 1,532.6 | 1,928.9 | 2,052.9 | 2,080.0 | 2,150.8 | 2,241.0 | 2,320.3 |
| Department of the Air Force ^b | 3,508.7 | 3,917.9 | 3,359.8 | 3,171.6 | 3,453.0 | 3,927.2 | 3,513.8 | 3,088.5 | 3,123.3 | 3,088.1 |
| Advanced Research Project Agency ^c | | | | | | | | | | |
| Departmentwide Funds ^c | 14.6 | 21.1 | 9.9 | 9.9 | 9.9 | 7.2 | 9.2 | 5.9 | 19.6 | 48.8 |
| Defense Agencies ^c | 299.4 | 384.0 | 452.4 | 492.9 | 505.4 | 507.3 | 480.0 | 448.4 | 459.1 | 446.0 |
| Department of Health, Education, and Welfare | 590.1 | 746.9 | 681.4 | 830.9 | 993.5 | 1,216.5 | 1,186.7 | 1,217.9 | 1,336.7 | 1,475.7 |
| Department of the Interior | 95.5 | 92.3 | 108.7 | 131.3 | 147.1 | 178.2 | 195.8 | 151.6 | 180.7 | 193.7 |
| Department of Transportation ^a | | | | 157.7 | 230.5 | 212.3 | 203.2 | 258.9 | 403.6 | 526.8 |
| Other Agencies | | | | | | | | | | |
| Atomic Energy Commission | 1,077.9 | 1,236.0 | 1,240.7 | 1,212.4 | 1,257.3 | 1,369.0 | 1,405.9 | 1,346.0 | 1,306.6 | 1,251.4 |
| Environmental Protection Agency | | | | | | | | | | |
| Federal Aviation Agency | 66.5 | 62.7 | 94.0 | 5,360.6 | 5,137.1 | 4,597.6 | 4,186.4 | 3,696.5 | 3,318.4 | 3,109.4 |
| National Aeronautics and Space Administration ^d | 2,327.0 | 3,733.2 | 4,562.0 | 175.7 | 224.3 | 266.7 | 280.0 | 292.9 | 330.4 | 403.0 |
| National Science Foundation | 110.6 | 153.8 | 149.7 | 49.4 | 36.7 | 41.0 | 77.1 | 79.3 | 90.8 | 95.0 |
| Office of Economic Opportunity | | | 4.2 | 38.4 | 41.3 | 44.1 | 49.8 | 58.0 | 61.2 | 61.9 |
| Veterans Administration | 29.9 | 32.3 | 36.6 | 52.7 | 76.5 | 79.6 | 104.8 | 132.8 | 201.8 | 224.4 |
| All Other Agencies | 34.8 | 37.0 | 48.6 | | | | | | | |

^a The Department of Transportation, as of 1965, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

^b Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

^c Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds. Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency funds only.

^d National Advisory Committee for Aeronautics prior to fiscal year 1958.

Table C-9A. Federal expenditures for R&D plant, by agency, fiscal years 1952-72

[Millions of dollars]

| Agency | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total, all agencies | 268.0 | 275.4 | 263.3 | 208.2 | 214.1 | 342.9 | 342.2 | 347.1 | 443.8 | 539.1 | 555.2 |
| Departments | | | | | | | | | | | |
| Department of Agriculture | 2 | 2 | 5 | 3.2 | 5.0 | 1.5 | 2.9 | 7.0 | 10.8 | 6.4 | 4.5 |
| Department of Commerce ^a | 1.2 | 1.4 | 2.6 | 1.0 | 2.2 | 1.6 | 3 | 1.7 | 3.4 | 3.4 | 9.5 |
| Department of Defense, Total | 150.0 | 155.6 | 145.2 | 110.5 | 120.0 | 178.1 | 135.8 | 88.9 | 100.7 | 116.7 | 92.0 |
| Department of the Army ^b | 35.0 | 31.1 | 30.5 | 27.6 | 20.0 | 15.2 | 17.0 | 12.6 | 42.7 | 52.3 | 17.1 |
| Department of the Navy ^b | 15.0 | 36.3 | 30.0 | 10.6 | 10.0 | 17.6 | 33.9 | 31.6 | 23.6 | 26.5 | 23.5 |
| Department of the Air Force ^b | 100.0 | 88.2 | 84.7 | 72.3 | 90.0 | 145.3 | 84.9 | 41.8 | 19.8 | 20.0 | 40.0 |
| Advanced Research Project Agency ^c | | | | | | | | 2.9 | 14.6 | 17.9 | 11.4 |
| Departmentwide Funds ^c | | | | | | | | | | | |
| Defense Agencies ^c | | | | | | | | | | | |
| Department of Health, Education, and Welfare | 16.2 | 17.5 | 9.2 | 4.2 | 2.8 | 6.5 | 13.6 | 25.6 | 32.4 | 30.6 | 36.0 |
| Department of the Interior | 3.0 | 3.3 | 3.1 | .5 | .5 | .1 | .2 | 3.1 | 2.2 | 3.9 | 6.4 |
| Department of Transportation ^a | | | | | | | | | | | |
| Other Agencies | | | | | | | | | | | |
| Atomic Energy Commission | 80.8 | 68.2 | 59.7 | 58.1 | 63.2 | 128.5 | 160.2 | 177.3 | 224.2 | 260.9 | 255.2 |
| Environmental Protection Agency | | | | | | | | | | | |
| Federal Aviation Agency | | | | | | | | | | | |
| National Aeronautics and Space Administration ^d | 16.5 | 29.1 | 42.0 | 30.4 | 20.6 | 20.8 | 17.2 | 24.8 | 54.4 | 98.2 | 114.3 |
| National Science Foundation | | | | .3 | 1.6 | 3.6 | 4.3 | 8.8 | 6.6 | 11.4 | 20.6 |
| Veterans Administration | | | | | | 2.1 | 2.7 | 4.0 | 4.0 | 1.0 | 3.4 |
| All Other Agencies | .1 | .1 | .9 | .1 | .1 | .1 | 5.0 | 2.4 | 2.1 | 2.1 | 5.8 |

| Agency | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
|--|-------|-------|---------|---------|-------|-------|-------|-------|-------|-------|
| Total, all agencies | 673.6 | 948.1 | 1,077.4 | 1,047.8 | 786.1 | 715.9 | 652.2 | 578.9 | 661.1 | 641.8 |
| Departments | | | | | | | | | | |
| Department of Agriculture | 8.4 | 5.0 | 6.1 | 7.9 | 16.2 | 23.7 | 13.7 | 13.6 | 9.9 | 10.7 |
| Department of Commerce ^a | 21.9 | 31.1 | 27.7 | 18.7 | 11.8 | 6.2 | 3.3 | 5.1 | 6.7 | 5.6 |
| Department of Defense, Total | 55.2 | 84.1 | 99.9 | 54.5 | 73.5 | 173.5 | 207.9 | 140.8 | 163.3 | 154.1 |
| Department of the Army ^b | 15.0 | 18.8 | 20.2 | 12.1 | 24.6 | 43.9 | 32.5 | 18.2 | 46.5 | 38.1 |
| Department of the Navy ^b | 8.8 | 9.1 | 22.5 | 16.0 | 13.0 | 51.2 | 28.8 | 21.6 | 30.0 | 31.3 |
| Department of the Air Force ^b | 30.4 | 33.2 | 45.0 | 22.6 | 34.1 | 60.6 | 112.5 | 61.5 | 50.2 | 51.1 |
| Advanced Research Project Agency ^c | | | | | | | | | | |
| Departmentwide Funds ^c | | | | | | | | | | |
| Defense Agencies ^c | 1.0 | 23.0 | 12.2 | 3.8 | 1.8 | 17.7 | 34.2 | 39.6 | 36.6 | 33.6 |
| Department of Health, Education, and Welfare | 42.2 | 46.6 | 56.6 | 48.6 | 81.6 | 66.6 | 33.3 | 43.3 | 53.7 | 62.2 |
| Department of the Interior | 7.2 | 9.7 | 10.1 | 18.0 | 19.7 | 16.9 | 8.4 | 8.3 | 12.8 | 14.9 |
| Department of Transportation ^a | | | | 7.9 | 8.7 | 6.8 | 4.8 | 3.7 | 12.6 | 34.2 |
| Other Agencies | | | | | | | | | | |
| Atomic Energy Commission | 257.7 | 269.1 | 279.4 | 249.5 | 209.6 | 225.3 | 248.1 | 270.0 | 312.3 | 271.6 |
| Environmental Protection Agency | | | | | | | | | | |
| Federal Aviation Agency | 8.2 | 11.2 | 2.4 | | | | | | | |
| National Aeronautics and Space Administration ^d | 225.3 | 437.8 | 530.9 | 572.4 | 288.6 | 126.1 | 65.3 | 56.6 | 50.6 | 43.0 |
| National Science Foundation | 42.5 | 49.1 | 56.6 | 65.2 | 70.5 | 66.9 | 62.3 | 31.2 | 29.3 | 27.6 |
| Veterans Administration | 3.2 | 1.7 | 3.7 | 1.1 | 5.1 | 3.3 | 4.2 | 3.7 | 5.8 | 9.8 |
| All Other Agencies | 1.8 | 2.7 | 3.9 | 1.4 | .8 | .6 | .9 | .5 | 1.6 | 1.2 |

^a The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

^b Includes pay and allowances of military R&D personnel beginning in fiscal year 1963, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1964.

^c Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds.

^d Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Funds only.

^e National Advisory Committee for Aeronautics prior to fiscal year 1958.

Table C-95. Federal obligations for research, development, and R&D plant, by agency, fiscal years 1947-72

[Millions of dollars]

| Agency | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 |
|--|-------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total, all agencies | 690.9 | 887.6 | 1,105.1 | 1,175.3 | 1,811.9 | 2,194.5 | 3,361.4 | 3,039.0 | 2,744.7 | 3,266.9 | 4,389.2 | 4,906.0 | 7,122.6 |
| Departments | | | | | | | | | | | | | |
| Department of Agriculture | 40.2 | 46.4 | 53.9 | 57.7 | 55.2 | 55.7 | 56.6 | 67.2 | 73.3 | 83.6 | 102.8 | 113.0 | 138.6 |
| Department of Commerce | 6.4 | 9.8 | 11.9 | 22.7 | 12.3 | 14.1 | 11.2 | 8.3 | 15.9 | 18.4 | 19.3 | 18.6 | 30.1 |
| Department of Defense, Total | 503.3 | 485.8 | 651.9 | 635.6 | 1,278.0 | 1,706.6 | 2,732.8 | 2,416.4 | 2,084.2 | 2,430.6 | 3,250.0 | 3,480.3 | 5,236.8 |
| Department of the Army ^b | 112.4 | 97.7 | 119.2 | 120.9 | 317.1 | 535.9 | 930.7 | 796.2 | 443.5 | 420.0 | 544.5 | 615.3 | 1,186.8 |
| Department of the Navy ^b | 269.2 | 247.3 | 313.9 | 272.9 | 489.6 | 608.1 | 697.0 | 625.4 | 573.3 | 713.3 | 856.7 | 887.9 | 1,381.1 |
| Department of the Air Force ^b | 121.7 | 140.8 | 218.8 | 241.8 | 471.3 | 562.6 | 1,105.1 | 994.8 | 1,045.7 | 1,252.8 | 1,811.9 | 1,903.6 | 2,461.4 |
| Advanced Research Projects Agency ^c | | | | | | | | | | | | 15.5 | 171.8 |
| Departmentwide Funds ^c | | | | | | | | | 21.7 | 44.5 | 36.9 | 58.0 | 35.6 |
| Defense Agencies ^c | | | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^d | 18.8 | 27.1 | 39.9 | 65.3 | 53.0 | 52.0 | 58.7 | 62.0 | 70.9 | 88.9 | 177.9 | 217.9 | 278.7 |
| Department of the Interior | 16.9 | 28.0 | 35.6 | 31.4 | 32.2 | 36.0 | 34.4 | 38.7 | 32.6 | 36.6 | 45.3 | 51.9 | 63.7 |
| Department of Transportation ^e | | | | | | | | | | | | | |
| Other Agencies | | | | | | | | | | | | | |
| Atomic Energy Commission | 64.6 | 212.5 | 246.9 | 284.2 | 278.5 | 228.9 | 363.3 | 367.9 | 372.9 | 505.1 | 544.6 | 828.6 | 925.2 |
| Environmental Protection Agency | | | | | | | | | | | | | 35.1 |
| Federal Aviation Agency | | | | | | | | | | | | | 18.4 |
| National Aeronautics and Space Administration ^e | 29.9 | 44.4 | 50.4 | 62.7 | 84.4 | 81.7 | 78.6 | 56.9 | 64.5 | 65.7 | 83.4 | 97.3 | 299.7 |
| National Science Foundation | | | | | | | 2.3 | 4.6 | 10.3 | 17.4 | 37.8 | 41.5 | 75.2 |
| Office of Economic Opportunity | | | | | | | | | | | | | |
| Veterans Administration | 1.4 | 3.1 | 4.3 | 3.8 | 5.1 | 3.9 | 5.1 | 5.3 | 5.6 | 6.5 | 10.1 | 12.6 | 17.1 |
| All Other Agencies | 9.4 | 10.5 | 10.3 | 11.9 | 13.1 | 14.7 | 18.4 | 11.6 | 14.6 | 14.1 | 18.1 | 26.0 | 22.5 |

| Agency | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
|--|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Total, all agencies | 8,080.0 | 9,607.1 | 11,069.1 | 13,663.0 | 15,323.9 | 15,745.9 | 16,178.8 | 17,149.4 | 16,525.3 | 16,306.2 | 15,854.3 | 16,046.3 | 17,249.8 |
| Departments | | | | | | | | | | | | | |
| Department of Agriculture | 129.1 | 145.6 | 166.1 | 174.8 | 191.4 | 233.7 | 256.7 | 260.9 | 271.9 | 270.8 | 286.4 | 311.7 | 317.7 |
| Department of Commerce ^a | 33.4 | 46.8 | 70.9 | 80.9 | 98.6 | 63.5 | 66.4 | 78.9 | 88.1 | 75.3 | 125.5 | 166.4 | 185.3 |
| Department of Defense, Total | 5,825.3 | 6,687.9 | 6,816.5 | 7,372.8 | 7,352.5 | 6,865.0 | 7,099.0 | 8,135.9 | 7,907.7 | 7,890.0 | 7,500.9 | 7,582.0 | 8,492.4 |
| Department of the Army ^b | 1,182.8 | 1,153.5 | 1,224.6 | 1,311.6 | 1,389.3 | 1,478.3 | 1,615.0 | 1,703.3 | 1,593.9 | 1,666.5 | 1,687.0 | 1,729.3 | 2,108.7 |
| Department of the Navy ^b | 1,557.4 | 1,564.6 | 1,556.6 | 1,609.5 | 1,640.0 | 1,462.2 | 1,613.3 | 2,122.5 | 2,078.4 | 2,189.7 | 2,276.1 | 2,273.4 | 2,553.0 |
| Department of the Air Force ^b | 2,833.5 | 3,622.2 | 3,619.8 | 3,988.9 | 3,822.6 | 3,382.6 | 3,373.3 | 3,819.9 | 3,724.5 | 3,604.2 | 3,049.1 | 3,075.3 | 3,265.4 |
| Advanced Research Projects Agency ^c | 212.4 | 222.4 | 209.1 | 11.1 | 11.8 | 11.3 | 10.0 | 10.6 | 7.3 | 5.0 | 4.1 | 53.6 | 53.7 |
| Departmentwide Funds ^c | 39.2 | 125.2 | 206.5 | 451.7 | 488.8 | 531.2 | 487.5 | 479.5 | 503.5 | 454.6 | 484.5 | 450.5 | 511.7 |
| Defense Agencies ^c | | | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^d | 358.6 | 466.2 | 617.4 | 715.9 | 847.7 | 970.5 | 1,142.7 | 1,207.2 | 1,298.5 | 350.2 | 1,522.2 | 1,504.3 | 1,658.5 |
| Department of the Interior | 66.7 | 79.1 | 89.4 | 105.9 | 114.3 | 127.4 | 162.6 | 202.7 | 217.5 | 23 | 168.5 | 199.1 | 216.6 |
| Department of Transportation ^e | | | | | | | 181.5 | 292.6 | 179.8 | 23 | 322.8 | 456.2 | 525.8 |
| Other Agencies | | | | | | | | | | | | | |
| Atomic Energy Commission | 988.2 | 1,063.5 | 1,316.0 | 1,388.6 | 1,478.6 | 1,539.7 | 1,441.6 | 1,484.9 | 1,534.3 | 1,708.5 | 1,611.9 | 1,660.0 | 1,494.3 |
| Environmental Protection Agency | | | | | | | | | | | | | 166.7 |
| Federal Aviation Agency | 52.9 | 52.8 | 74.6 | 90.6 | 73.7 | 71.7 | | | | | 90.5 | 121.0 | |
| National Aeronautics and Space Administration ^e | | | | | | | | | | | | | |
| National Science Foundation | 486.9 | 905.1 | 1,684.2 | 3,434.1 | 4,842.2 | 5,481.9 | 5,327.4 | 4,987.8 | 4,494.4 | 4,018.1 | 3,833.4 | 3,272.7 | 3,244.8 |
| Office of Economic Opportunity | 87.6 | 106.3 | 169.6 | 218.3 | 238.0 | 275.4 | 323.1 | 327.9 | 350.3 | 300.7 | 312.3 | 366.6 | 513.2 |
| Veterans Administration | 19.1 | 23.2 | 30.8 | 33.1 | 34.3 | 14.9 | 64.0 | 44.2 | 44.1 | 70.6 | 123.4 | 115.6 | 100.0 |
| All Other Agencies | 32.2 | 30.4 | 33.6 | 37.9 | 52.6 | 55.1 | 67.8 | 80.5 | 90.7 | 112.3 | 165.3 | 214.1 | 271.3 |

^a The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

^b Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

^c Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA), and other agencies such as Defense Atomic Support Agency and Defense Communications Agency.

With the exception of ARPA, these agencies were previously included in departmentwide funds. Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Fund is only.

^d Federal Security Agency prior to fiscal year 1952.

^e National Advisory Committee for Aeronautics prior to fiscal year 1958.

Sources: National Science Foundation and the Bureau of the Budget (prior to 1952).

Table C-96. Federal obligations for research and development, by agency, fiscal years 1947-72

(Millions of dollars)

| Agency | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 |
|--|-------|-------|-------|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total, all agencies | 619.5 | 776.5 | 937.7 | 972.6 | 1,481.9 | 1,887.3 | 3,106.0 | 2,875.0 | 2,532.8 | 2,988.2 | 3,932.0 | 4,569.7 | 6,693.5 |
| Departments | | | | | | | | | | | | | |
| Department of Agriculture | 40.0 | 45.7 | 53.2 | 56.9 | 55.1 | 55.3 | 56.0 | 59.3 | 72.2 | 83.0 | 99.5 | 110.2 | 120.7 |
| Department of Commerce ^a | 3.7 | 8.9 | 10.9 | 22.4 | 11.0 | 10.3 | 10.9 | 7.8 | 15.0 | 18.2 | 17.7 | 18.3 | 25.6 |
| Department of Defense, Total | 469.3 | 485.8 | 626.1 | 599.7 | 1,125.9 | 1,508.5 | 2,577.2 | 2,320.0 | 1,945.1 | 2,268.6 | 2,985.6 | 3,403.3 | 5,161.6 |
| Department of the Army ^b | 104.3 | 97.7 | 114.7 | 119.0 | 307.1 | 458.8 | 899.6 | 763.3 | 419.3 | 408.0 | 500.6 | 603.3 | 1,174.2 |
| Department of the Navy ^b | 252.3 | 247.3 | 298.0 | 257.5 | 450.2 | 551.1 | 660.7 | 615.3 | 564.8 | 673.3 | 804.2 | 867.9 | 1,349.5 |
| Department of the Air Force ^b | 112.7 | 140.8 | 213.5 | 223.1 | 368.6 | 458.6 | 1,016.9 | 941.4 | 939.3 | 1,142.8 | 1,643.9 | 1,858.6 | 2,440.0 |
| Advanced Research Projects Agency ^c | | | | | | | | | 21.7 | 44.5 | 36.9 | 58.0 | 35.6 |
| Departmentwide Funds ^c | | | | | | | | | | | | | |
| Defense Agencies ^c | | | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^d | 10.6 | 24.3 | 25.2 | 34.2 | 37.9 | 43.6 | 49.9 | 58.2 | 68.0 | 86.0 | 144.2 | 184.9 | 242.8 |
| Department of the Interior | 16.9 | 20.3 | 30.2 | 26.7 | 30.4 | 30.7 | 32.1 | 37.7 | 32.4 | 36.1 | 45.2 | 51.1 | 60.5 |
| Department of Transportation ^a | | | | | | | | | | | | | |
| Other Agencies | | | | | | | | | | | | | |
| Atomic Energy Commission | 39.9 | 145.4 | 140.0 | 172.2 | 157.9 | 168.9 | 309.9 | 323.4 | 327.3 | 410.7 | 566.0 | 644.0 | 699.8 |
| Environmental Protection Agency | | | | | | | | | | | | | |
| Federal Aviation Agency ^a | | | | | | | | | | | | | |
| National Aeronautics and Space Administration ^c | 26.7 | 33.0 | 38.3 | 42.8 | 45.4 | 50.5 | 48.4 | 47.3 | 43.0 | 49.5 | 55.3 | 77.1 | 261.7 |
| National Science Foundation | | | | | | | 2.3 | 4.6 | 9.7 | 16.0 | 30.6 | 33.6 | 60.4 |
| Office of Economic Opportunity | 1.4 | 3.1 | 4.3 | 3.8 | 5.1 | 3.9 | 5.1 | 5.3 | 5.6 | 6.5 | 7.7 | 10.1 | 12.8 |
| Veterans Administration | 8.9 | 10.0 | 9.6 | 11.8 | 13.0 | 14.7 | 14.1 | 11.3 | 14.5 | 13.6 | 17.9 | 21.0 | 20.2 |
| All Other Agencies | | | | | | | | | | | | | |

| Agency | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
|--|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Total, all agencies | 7,551.7 | 9,058.6 | 10,289.9 | 12,294.7 | 14,225.4 | 14,614.3 | 15,320.4 | 16,579.3 | 15,821.4 | 15,637.2 | 15,379.8 | 15,387.2 | 16,661.5 |
| Departments | | | | | | | | | | | | | |
| Department of Agriculture | 125.8 | 143.4 | 157.2 | 168.0 | 189.0 | 224.6 | 234.9 | 252.6 | 253.5 | 260.1 | 281.2 | 302.8 | 314.0 |
| Department of Commerce ^a | 31.4 | 32.3 | 40.1 | 52.2 | 53.8 | 61.3 | 55.2 | 74.8 | 83.9 | 72.1 | 121.6 | 157.9 | 181.7 |
| Department of Defense, Total | 5,711.5 | 6,574.0 | 6,722.9 | 7,285.7 | 7,261.9 | 6,796.5 | 7,023.6 | 8,049.2 | 7,709.3 | 7,696.3 | 7,360.4 | 7,420.2 | 8,337.0 |
| Department of the Army ^b | 1,117.0 | 1,117.9 | 1,203.5 | 1,297.4 | 1,376.9 | 1,459.5 | 1,595.4 | 1,561.3 | 1,563.4 | 1,643.8 | 1,659.8 | 1,691.1 | 2,071.4 |
| Department of the Navy ^b | 1,535.5 | 1,539.0 | 1,539.1 | 1,597.3 | 1,621.2 | 1,449.5 | 1,601.7 | 2,108.9 | 2,024.8 | 2,124.2 | 2,257.9 | 2,236.9 | 2,515.3 |
| Department of the Air Force ^b | 2,815.5 | 3,588.9 | 3,569.8 | 3,544.7 | 3,784.0 | 3,351.0 | 3,342.3 | 3,794.3 | 3,621.7 | 3,498.5 | 2,999.0 | 3,024.6 | 3,209.0 |
| Advanced Research Projects Agency ^c | 204.4 | 203.1 | 206.5 | 11.1 | 11.8 | 11.3 | 10.0 | 10.6 | 7.3 | 5.0 | 4.1 | 53.6 | 53.7 |
| Departmentwide Funds ^c | 39.2 | 125.2 | 206.5 | 435.2 | 467.9 | 525.2 | 484.2 | 474.0 | 492.0 | 424.6 | 443.6 | 414.0 | 482.6 |
| Defense Agencies ^c | | | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^d | 319.8 | 428.5 | 576.9 | 656.2 | 776.9 | 869.4 | 1,014.4 | 1,146.6 | 1,251.8 | 1,297.4 | 1,221.0 | 1,479.9 | 1,635.4 |
| Department of the Interior | 64.0 | 73.3 | 85.6 | 92.1 | 106.4 | 113.2 | 143.2 | 170.4 | 190.6 | 207.6 | 157.9 | 185.1 | 204.3 |
| Department of Transportation ^a | | | | | | | 171.7 | 283.6 | 171.7 | 228.0 | 317.3 | 436.7 | 483.2 |
| Other Agencies | | | | | | | | | | | | | |
| Atomic Energy Commission | 761.7 | 850.2 | 1,029.2 | 1,077.9 | 1,236.0 | 1,240.7 | 1,212.4 | 1,257.3 | 1,369.0 | 1,405.9 | 1,346.0 | 1,306.6 | 1,251.4 |
| Environmental Protection Agency | | | | | | | | | | | | | |
| Federal Aviation Agency ^a | 47.9 | 48.2 | 66.2 | 83.5 | 62.8 | 64.4 | | | | | | | |
| National Aeronautics and Space Administration ^c | 369.3 | 776.9 | 1,439.2 | 2,857.4 | 4,286.6 | 4,951.5 | 5,050.0 | 4,867.0 | 4,429.4 | 3,963.3 | 3,799.9 | 3,247.7 | 3,188.5 |
| National Science Foundation | 74.7 | 84.0 | 113.9 | 194.1 | 170.2 | 187.2 | 243.7 | 262.4 | 283.5 | 273.8 | 289.0 | 345.0 | 494.3 |
| Office of Economic Opportunity | | | | | | | 64.0 | 44.2 | 44.1 | 70.6 | 58.5 | 115.6 | 100.0 |
| Veterans Administration | 15.1 | 22.0 | 27.5 | 29.9 | 33.7 | 37.4 | 40.1 | 40.9 | 44.7 | 50.2 | 58.5 | 61.6 | 61.9 |
| All Other Agencies | 30.6 | 25.7 | 31.2 | 37.6 | 48.0 | 53.4 | 67.3 | 80.2 | 89.9 | 111.9 | 165.0 | 211.9 | 270.4 |

^a The Department of Transportation, as of 1966, includes the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce; the Federal Aviation Agency; and the U.S. Coast Guard formerly under the Treasury Department.

^b Includes pay and allowances of military R&D personnel beginning in fiscal year 1953, and support from procurement appropriations of development, test, and evaluation, starting with fiscal year 1954.

^c Starting with 1963, Defense Agencies include the Advanced Research Projects Agency (ARPA),

and other agencies such as Defense Atomic Support Agency and Defense Communications Agency. With the exception of ARPA, these agencies were previously included in departmentwide funds. Starting with 1963, Departmentwide Funds include Military Assistance, Civil Defense, and Emergency Funds only.

^d Federal Security Agency prior to fiscal year 1952.

^e National Advisory Committee for Aeronautics prior to fiscal year 1958.

Sources: National Science Foundation and the Bureau of the Budget (prior to 1952).

Table C-97. Federal obligations for R&D plant, by agency, fiscal years 1947-72

(Millions of dollars)

| Agency | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 |
|--|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total, all agencies | 71.4 | 91.1 | 167.4 | 202.7 | 330.0 | 307.2 | 255.4 | 164.0 | 211.9 | 278.7 | 457.2 | 336.3 | 429.1 |
| Departments | | | | | | | | | | | | | |
| Department of Agriculture | 7.7 | 7.7 | 7.7 | 8.8 | 1.1 | 4.4 | 6.6 | 7.9 | 1.1 | 6.6 | 3.0 | 2.8 | 17.9 |
| Department of Commerce ^a | 34.0 | 9.9 | 25.8 | 35.9 | 157.1 | 198.1 | 155.6 | 96.4 | 139.1 | 162.0 | 264.4 | 77.0 | 4.5 |
| Department of Defense, Total | | | | | | | | | | | | | 75.1 |
| Department of the Army | 8.1 | | 4.5 | 1.9 | 10.0 | 77.1 | 31.1 | 32.9 | 24.2 | 12.0 | 43.9 | 12.0 | 12.6 |
| Department of the Navy | 16.9 | | 15.9 | 15.3 | 39.4 | 57.0 | 35.3 | 10.1 | 8.5 | 40.0 | 52.5 | 20.0 | 31.6 |
| Department of the Air Force | 9.0 | | 5.3 | 18.7 | 102.7 | 64.0 | 88.2 | 53.4 | 106.4 | 110.0 | 168.0 | 45.0 | 21.4 |
| Advanced Research Projects Agency ^b | | | | | | | | | | | | | 9.5 |
| Defense Agencies ^b | | | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^c | 8.2 | 2.8 | 14.7 | 31.1 | 15.1 | 8.4 | 8.8 | 3.8 | 2.8 | 3.0 | 33.7 | 33.0 | 35.9 |
| Department of the Interior | | 7.7 | 5.4 | 2.7 | 1.8 | 5.2 | 2.3 | 1.0 | .1 | .5 | .1 | .8 | 3.1 |
| Department of Transportation ^a | | | | | | | | | | | | | |
| Other Agencies | | | | | | | | | | | | | |
| Atomic Energy Commission | 24.7 | 67.1 | 106.9 | 112.0 | 120.6 | 60.0 | 53.4 | 44.5 | 45.6 | 94.3 | 116.6 | 184.6 | 225.4 |
| Environmental Protection Agency | | | | | | | | | | | | 2.1 | 7.8 |
| Federal Aviation Agency ^a | | | | | | | | | | | | 20.3 | 38.0 |
| National Aeronautics and Space Administration ^d | 3.2 | 11.4 | 12.1 | 19.9 | 39.0 | 31.2 | 30.2 | 9.6 | 21.5 | 16.2 | 28.1 | 7.9 | 14.8 |
| National Science Foundation | | | | | | | | | .7 | 1.4 | 2.4 | 2.6 | 4.3 |
| Veterans Administration | | | | | | | | | .3 | .5 | .2 | 5.0 | 2.3 |
| All Other Agencies | .5 | .5 | .7 | .1 | .1 | | 4.3 | | .1 | | | | |

| Agency | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates | |
|--|-------|-------|-------|---------|---------|---------|-------|-------|-------|-------|-------|-----------|-------|
| | | | | | | | | | | | | 1971 | 1972 |
| Total, all agencies..... | 528.3 | 548.5 | 779.1 | 1,168.3 | 1,098.5 | 1,131.6 | 858.3 | 620.1 | 603.8 | 669.0 | 521.4 | 659.1 | 588.3 |
| Departments | | | | | | | | | | | | | |
| Department of Agriculture..... | 3.4 | 2.2 | 9.0 | 6.8 | 2.4 | 9.1 | 21.8 | 8.2 | 18.3 | 10.7 | 5.3 | 8.9 | 3.7 |
| Department of Commerce ^a | 2.0 | 14.5 | 30.8 | 28.7 | 44.8 | 2.2 | 11.2 | 4.1 | 4.2 | 3.2 | 3.9 | 8.5 | 3.6 |
| Department of Defense, Total..... | 113.7 | 113.9 | 93.6 | 87.2 | 90.6 | 68.5 | 75.4 | 86.7 | 198.3 | 193.8 | 140.6 | 161.8 | 160.4 |
| Department of the Army..... | 65.8 | 35.6 | 21.1 | 14.2 | 12.3 | 18.8 | 29.6 | 42.0 | 30.5 | 22.7 | 27.2 | 38.1 | 37.3 |
| Department of the Navy..... | 21.9 | 25.6 | 17.5 | 12.3 | 18.8 | 12.7 | 11.6 | 13.6 | 53.6 | 35.5 | 18.2 | 36.5 | 37.7 |
| Department of the Air Force..... | 18.0 | 33.3 | 50.0 | 44.2 | 38.6 | 31.0 | 30.9 | 23.6 | 102.8 | 105.6 | 59.2 | 50.6 | 56.4 |
| Advanced Research Projects Agency ^b | 8.0 | 19.3 | 5.1 | 16.5 | 20.9 | 6.0 | 3.3 | 5.5 | 11.5 | 30.0 | 36.0 | 36.5 | 29.1 |
| Defense Agencies ^b | | | | | | | | | | | | | |
| Department of Health, Education, and Welfare ^c | 38.8 | 37.7 | 40.5 | 59.7 | 70.8 | 101.2 | 128.3 | 60.6 | 46.7 | 52.8 | 31.2 | 24.4 | 23.1 |
| Department of the Interior..... | 2.7 | 5.8 | 3.8 | 13.7 | 7.9 | 14.2 | 19.4 | 32.3 | 26.9 | 14.2 | 10.6 | 14.0 | 12.3 |
| Department of Transportation ^a | | | | | | | 9.8 | 9.0 | 8.1 | 5.6 | 5.5 | 19.5 | 42.6 |
| Other Agencies | | | | | | | | | | | | | |
| Atomic Energy Commission..... | 226.6 | 213.3 | 286.8 | 320.7 | 242.6 | 299.1 | 229.3 | 227.6 | 165.3 | 302.5 | 265.9 | 33.4 | 243.0 |
| Environmental Protection Agency..... | | | | | | | | | | | 2.0 | 4.9 | 22.3 |
| Federal Aviation Agency ^a | 5.0 | | 8.4 | 7.2 | 10.9 | 7.3 | | | | | | | |
| National Aeronautics and Space Administration ^d | | 4.6 | | | | | | | | | | | |
| National Science Foundation..... | 117.7 | 128.2 | 245.0 | 576.7 | 555.7 | 530.4 | 277.4 | 120.8 | 65.0 | 54.8 | 33.4 | 25.0 | 56.3 |
| Veterans Administration..... | 12.8 | 22.3 | 55.7 | 64.1 | 67.8 | 88.2 | 79.4 | 65.4 | 68.9 | 26.9 | 23.3 | 21.6 | 18.9 |
| All Other Agencies..... | 4.0 | 1.2 | 3.4 | 3.2 | 5.5 | 9.9 | 5.9 | 5.0 | 3.3 | 4.1 | 2.6 | 15.0 | 1.3 |
| | 1.5 | 4.7 | 2.2 | .3 | 4.6 | 1.7 | .5 | .3 | .8 | .4 | .1 | 2.1 | .8 |

^a The Department of Transportation, as of 1968, included the Bureau of Public Roads and the Office of Transportation Research and Development formerly in the Department of Commerce, the Federal Aviation Agency, and the U.S. Coast Guard formerly under the Treasury Department.

^b Starting with 1963, Defense Agencies include the Advanced Research Projects Agency and other agencies such as Defense Atomic Support Agency and Defense Communications Agency.

^c Federal Security Agency prior to fiscal year 1952.

^d National Advisory Committee for Aeronautics prior to fiscal year 1958.

Table C-98. Federal obligations for research and development, by character of work and R&D plant, fiscal years 1956-72

| Fiscal years | Total | Research | | Develop- ment | R&D plant |
|------------------|--------|----------|---------|------------------|--------------|
| | | Basic | Applied | | |
| 1956 | 3,267 | 206 | 546 | 2,136 | 279 |
| 1957 | 4,389 | 262 | 622 | 3,007 | 457 |
| 1958 | 4,906 | 335 | 743 | 3,366 | 336 |
| 1959 | 7,123 | 517 | 886 | 5,291 | 429 |
| 1960 | 8,080 | 610 | 1,331 | 5,611 | 528 |
| 1961 | 9,607 | 825 | 1,796 | 6,438 | 549 |
| 1962 | 11,069 | 1,106 | 2,166 | 7,017 | 779 |
| 1963 | 13,663 | 1,389 | 2,652 | 8,454 | 1,168 |
| 1964 | 15,324 | 1,567 | 2,898 | 9,751 | 1,099 |
| 1965 | 15,746 | 1,690 | 3,164 | 9,760 | 1,132 |
| 1966 | 16,179 | 1,844 | 3,427 | 10,050 | 858 |
| 1967 | 17,149 | 2,015 | 3,258 | 11,215 | 620 |
| 1968 | 16,525 | 2,072 | 3,293 | 10,557 | 604 |
| 1969 | 16,306 | 2,054 | 3,145 | 10,358 | 669 |
| 1970 | 15,854 | 2,062 | 3,540 | 9,728 | 524 |
| 1971 (estimated) | 15,046 | 2,165 | 3,830 | 9,392 | 659 |
| 1972 (estimated) | 17,250 | 2,399 | 4,244 | 10,018 | 588 |

(Millions of dollars)

Table C-99. Federal obligations for total research, by selected agency, fiscal years 1956-72

| Agency | Fiscal years | | | | | | | | | | |
|---|--------------|------|-------|-------|-------|-------|-------|------|------|------|------|
| | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 |
| Total | 852 | 925 | 1,079 | 1,403 | 1,941 | 2,620 | 3,273 | | | | |
| Department of Agriculture | 83 | 95 | 105 | 116 | 121 | 138 | 150 | | | | |
| Department of Commerce | 8 | 11 | 13 | 19 | 23 | 27 | 29 | | | | |
| Department of Defense | 482 | 445 | 489 | 523 | 861 | 1,173 | 1,311 | | | | |
| Department of Health, Education, and Welfare | 83 | 142 | 182 | 240 | 317 | 427 | 574 | | | | |
| Department of the Interior | 34 | 40 | 41 | 51 | 56 | 65 | 76 | | | | |
| Department of Transportation | | | | | | | | | | | |
| Atomic Energy Commission | 87 | 99 | 131 | 170 | 199 | 220 | 247 | | | | |
| Environmental Protection Agency | | | | | | | | | | | |
| National Aeronautics and Space Administration | 43 | 47 | 66 | 201 | 264 | 453 | 714 | | | | |
| National Science Foundation | 16 | 30 | 33 | 54 | 68 | 77 | 104 | | | | |
| Veterans Administration | 6 | 8 | 9 | 12 | 14 | 21 | 27 | | | | |
| All others | 11 | 7 | 9 | 16 | 17 | 19 | 40 | | | | |

(Millions of dollars)

| Agency | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|
| | | | | | | | | | 1971 | 1972 |
| | | | | | | | | | | |
| Total | 4,041 | 4,464 | 4,854 | 5,271 | 5,273 | 5,365 | 5,239 | 5,602 | 5,995 | 6,644 |
| Department of Agriculture | 160 | 182 | 213 | 228 | 237 | 239 | 251 | 272 | 293 | 303 |
| Department of Commerce | 36 | 39 | 44 | 41 | 51 | 56 | 56 | 94 | 128 | 144 |
| Department of Defense | 1,605 | 1,672 | 1,751 | 1,849 | 1,591 | 1,577 | 1,412 | 1,557 | 1,479 | 1,634 |
| Department of Health, Education, and Welfare | 1,653 | 1,772 | 1,862 | 1,966 | 1,082 | 1,147 | 1,174 | 1,129 | 1,362 | 1,490 |
| Department of the Interior | 76 | 90 | 98 | 121 | 143 | 152 | 164 | 135 | 144 | 144 |
| Department of Transportation | | | | 18 | 45 | 56 | 68 | 88 | 111 | 184 |
| Atomic Energy Commission | 281 | 308 | 334 | 371 | 392 | 402 | 417 | 433 | 423 | 411 |
| Environmental Protection Agency | | | | | | | | 53 | 61 | 79 |
| National Aeronautics and Space Administration | 1,005 | 1,177 | 1,290 | 1,358 | 1,379 | 1,356 | 1,296 | 1,410 | 1,478 | 1,562 |
| National Science Foundation | 141 | 156 | 172 | 224 | 241 | 257 | 268 | 275 | 327 | 470 |
| Veterans Administration | 29 | 33 | 37 | 39 | 40 | 44 | 50 | 58 | 61 | 61 |
| All others | 54 | 35 | 48 | 56 | 72 | 79 | 93 | 111 | 137 | 162 |

^a Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations.

^b National Advisory Committee for Aeronautics prior to 1958.

Table C-100. Federal obligations for basic research, by selected agency, fiscal years 1952-72

(Millions of dollars)

| Agency | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 |
|--|------|------|------|------|------|------|------|------|------|
| Total..... | 162 | 154 | 148 | 162 | 206 | 262 | 335 | 517 | 610 |
| Department of Agriculture..... | 7 | 7 | 8 | 12 | 15 | 19 | 24 | 29 | 34 |
| Department of Defense ^a | 72 | 65 | 52 | 53 | 78 | 84 | 111 | 137 | 168 |
| Department of Health, Education, and Welfare..... | 15 | 15 | 17 | 21 | 26 | 38 | 50 | 75 | 103 |
| Atomic Energy Commission..... | 34 | 35 | 40 | 42 | 45 | 55 | 72 | 87 | 104 |
| National Aeronautics and Space Administration ^b | 18 | 16 | 14 | 13 | 13 | 16 | 26 | 107 | 97 |
| National Science Foundation..... | 1 | 2 | 5 | 10 | 15 | 30 | 33 | 54 | 68 |
| All others..... | 14 | 13 | 12 | 12 | 14 | 20 | 19 | 28 | 55 |

| Agency | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 |
|--|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total..... | 825 | 1,106 | 1,389 | 1,567 | 1,690 | 1,844 | 2,015 | 2,072 | 2,094 | 2,062 | 2,165 | 2,399 |
| Department of Agriculture..... | 41 | 50 | 56 | 68 | 90 | 94 | 100 | 100 | 107 | 116 | 123 | 128 |
| Department of Defense ^a | 173 | 204 | 231 | 241 | 263 | 262 | 284 | 263 | 276 | 247 | 243 | 245 |
| Department of Health, Education, and Welfare..... | 137 | 190 | 236 | 274 | 303 | 326 | 372 | 397 | 371 | 388 | 452 | 488 |
| Atomic Energy Commission..... | 167 | 192 | 219 | 238 | 258 | 281 | 302 | 282 | 285 | 287 | 278 | 266 |
| National Aeronautics and Space Administration ^b | 190 | 316 | 447 | 524 | 528 | 559 | 603 | 656 | 678 | 637 | 626 | 688 |
| National Science Foundation..... | 77 | 104 | 141 | 155 | 171 | 223 | 239 | 252 | 248 | 245 | 285 | 400 |
| All others..... | 39 | 50 | 59 | 66 | 77 | 98 | 115 | 122 | 129 | 142 | 158 | 184 |

^a Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations starting with fiscal year 1964 data.^b National Advisory Committee for Aeronautics prior to 1958.

Table C-101. Federal obligations for applied research, by selected agency, fiscal years 1956-72

(Millions of dollars)

| Agency | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|--|------|------|------|------|-------|-------|-------|
| Total..... | 646 | 662 | 744 | 886 | 1,331 | 1,796 | 2,166 |
| Department of Agriculture..... | 68 | 76 | 81 | 87 | 87 | 97 | 101 |
| Department of Commerce..... | 5 | 7 | 8 | 12 | 14 | 15 | 13 |
| Department of Defense ^a | 404 | 361 | 378 | 386 | 693 | 1,000 | 1,107 |
| Department of Health, Education, and Welfare..... | 57 | 104 | 133 | 165 | 214 | 291 | 384 |
| Department of the Interior..... | 25 | 25 | 29 | 34 | 36 | 41 | 50 |
| Department of Transportation..... | 42 | 44 | 59 | 83 | 95 | 53 | 55 |
| Atomic Energy Commission..... | 29 | 31 | 41 | 95 | 166 | 263 | 398 |
| Environmental Protection Agency..... | 1 | 1 | 7 | 9 | 11 | 18 | 24 |
| National Aeronautics and Space Administration ^b | 6 | 7 | 8 | 16 | 14 | 18 | 34 |
| National Science Foundation..... | 9 | 7 | 7 | 16 | 14 | 18 | 34 |
| Veterans Administration..... | | | | | | | |
| All others..... | | | | | | | |

^a Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations.^b National Advisory Committee for Aeronautics prior to 1958.

Table C-102. Federal obligations for development, by selected agency, fiscal years 1956-72

[Millions of dollars]

| Agency | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|--|-------|-------|-------|-------|-------|-------|-------|
| Total | 2,136 | 3,007 | 3,491 | 5,291 | 5,611 | 6,438 | 7,017 |
| Department of Defense ^a | 1,786 | 2,540 | 2,914 | 4,638 | 4,855 | 5,401 | 5,411 |
| Atomic Energy Commission | 324 | 429 | 513 | 530 | 533 | 630 | 783 |
| National Aeronautics and Space Administration ^b | 7 | 9 | 11 | 61 | 105 | 324 | 725 |
| All others | 19 | 29 | 53 | 62 | 93 | 83 | 98 |

Department of Defense^a
Atomic Energy Commission
National Aeronautics and Space Administration^b
All others

| Agency | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates |
|--|-------|-------|-------|--------|--------|--------|--------|-------|--------------|
| | | | | | | | | | 1971 1972 |
| Total | 8,454 | 9,761 | 9,760 | 10,050 | 11,256 | 10,557 | 10,398 | 9,728 | 9,392 10,018 |
| Department of Defense ^a | 5,680 | 5,590 | 5,045 | 5,174 | 6,458 | 6,132 | 6,284 | 5,804 | 5,941 6,698 |
| Atomic Energy Commission | 797 | 928 | 907 | 842 | 866 | 967 | 989 | 913 | 883 840 |
| National Aeronautics and Space Administration ^b | 1,852 | 3,109 | 3,662 | 3,692 | 3,488 | 3,073 | 2,667 | 2,390 | 1,770 1,627 |
| All others | 125 | 134 | 146 | 342 | 444 | 385 | 458 | 621 | 799 854 |

^a Includes pay and allowances of military R&D personnel and support from the procurement and operation and maintenance appropriations.

^b National Advisory Committee for Aeronautics prior to 1958.

Table C-103. Federal obligations for research and development, by performer, fiscal years 1955-72

[Millions of dollars]

| Performer | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|---|-------|-------|-------|-------|-------|-------|-------|--------|
| Total | 2,533 | 2,988 | 3,932 | 4,570 | 6,694 | 7,552 | 9,059 | 10,290 |
| Federal intramural ^a | 905 | 1,041 | 1,220 | 1,374 | 1,640 | 1,726 | 1,874 | 2,098 |
| Industrial firms ^b | 1,304 | 1,579 | 2,245 | 2,607 | 4,246 | 4,834 | 5,580 | 6,565 |
| Universities and colleges | 144 | 176 | 224 | 288 | 367 | 459 | 585 | 755 |
| FFRDC's administered by universities | 143 | 146 | 168 | 209 | 271 | 323 | 410 | 510 |
| Other nonprofit institutions ^b | 34 | 40 | 62 | 77 | 105 | 136 | 223 | 289 |
| All other performers | 3 | 7 | 13 | 15 | 64 | 74 | 77 | 73 |

Federal intramural^a
Industrial firms^b
Universities and colleges
FFRDC's administered by universities
Other nonprofit institutions^b
All other performers

| Performer | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates |
|---|--------|--------|--------|--------|--------|--------|--------|--------|---------------|
| | | | | | | | | | 1971 1972 |
| Total | 12,495 | 14,225 | 14,614 | 15,320 | 16,529 | 15,921 | 15,637 | 15,330 | 15,387 16,662 |
| Federal intramural ^a | 2,279 | 2,838 | 3,093 | 3,222 | 3,396 | 3,492 | 3,498 | 3,876 | 3,929 4,139 |
| Industrial firms ^b | 8,291 | 9,136 | 9,058 | 9,384 | 10,262 | 9,460 | 9,125 | 8,381 | 8,197 9,002 |
| Universities and colleges | 900 | 1,077 | 1,154 | 1,350 | 1,455 | 1,490 | 1,536 | 1,473 | 1,617 1,826 |
| FFRDC's administered by universities | 546 | 587 | 609 | 643 | 666 | 714 | 722 | 750 | 762 778 |
| Other nonprofit institutions ^b | 396 | 486 | 550 | 591 | 624 | 619 | 609 | 712 | 679 695 |
| All other performers | 84 | 101 | 111 | 130 | 127 | 145 | 147 | 139 | 204 222 |

^a Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

^b Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-104. Federal obligations for total research, by performer, fiscal years 1963-72

[Millions of dollars]

| Performer | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|
| | | | | | | | | | 1971 | 1972 |
| Total | 4,041 | 4,464 | 4,854 | 5,271 | 5,273 | 5,365 | 5,239 | 5,602 | 5,995 | 6,644 |
| Federal intramural ^a | 1,029 | 1,292 | 1,454 | 1,493 | 1,574 | 1,711 | 1,772 | 2,033 | 2,102 | 2,223 |
| Industrial firms ^b | 1,511 | 1,479 | 1,534 | 1,739 | 1,506 | 1,422 | 1,246 | 1,367 | 1,477 | 1,749 |
| Universities and colleges | 856 | 990 | 1,117 | 1,251 | 1,348 | 1,385 | 1,409 | 1,352 | 1,471 | 1,669 |
| FFRDC's administered by universities | 325 | 348 | 385 | 399 | 427 | 417 | 394 | 417 | 428 | 436 |
| Other nonprofit institutions ^b | 239 | 273 | 275 | 281 | 316 | 306 | 299 | 313 | 348 | 381 |
| All other performers | 81 | 83 | 89 | 107 | 101 | 124 | 119 | 120 | 169 | 186 |

^a Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

^b Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-105. Federal obligations for basic research, by performer, fiscal years 1958-72

[Millions of dollars]

| Performer | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 |
|---|------|------|------|------|-------|-------|
| | | | | | | |
| Total | 335 | 517 | 610 | 825 | 1,106 | 1,389 |
| Federal intramural ^a | 125 | 173 | 160 | 206 | 251 | 299 |
| Industrial firms ^b | 25 | 72 | 93 | 149 | 236 | 322 |
| Universities and colleges | 127 | 186 | 244 | 293 | 381 | 479 |
| FFRDC's administered by universities | 34 | 51 | 63 | 111 | 153 | 170 |
| Other nonprofit institutions ^b | 20 | 28 | 37 | 46 | 59 | 86 |
| All other performers | 3 | 8 | 11 | 19 | 26 | 33 |

| Performer | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates | |
|---|-------|-------|-------|-------|-------|-------|-------|-----------|-------|
| | | | | | | | | 1971 | 1972 |
| Total | 1,567 | 1,690 | 1,844 | 2,015 | 2,072 | 2,094 | 2,062 | 2,165 | 2,399 |
| Federal intramural ^a | 363 | 424 | 449 | 478 | 512 | 577 | 658 | 669 | 705 |
| Industrial firms ^b | 336 | 299 | 325 | 366 | 389 | 320 | 320 | 351 | 434 |
| Universities and colleges | 564 | 637 | 728 | 784 | 786 | 766 | 718 | 744 | 843 |
| FFRDC's administered by universities | 196 | 196 | 213 | 249 | 254 | 255 | 267 | 283 | 286 |
| Other nonprofit institutions ^b | 90 | 96 | 98 | 108 | 101 | 73 | 63 | 69 | 76 |
| All other performers | 35 | 38 | 33 | 30 | 29 | 25 | 35 | 49 | 55 |

^a Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

^b Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-106. Federal obligations for applied research, by performer, fiscal years 1963-72

[Millions of dollars]

| Performer | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|
| | | | | | | | | | 1971 | 1972 |
| Total | 2,652 | 2,898 | 3,164 | 3,427 | 3,258 | 3,293 | 3,145 | 3,540 | 3,830 | 4,244 |
| Federal intramural ^a | 730 | 928 | 1,029 | 1,045 | 1,095 | 1,199 | 1,195 | 1,375 | 1,433 | 1,519 |
| Industrial firms ^b | 1,189 | 1,143 | 1,235 | 1,414 | 1,140 | 1,033 | 848 | 1,047 | 1,126 | 1,315 |
| Universities and colleges | 377 | 425 | 523 | 565 | 565 | 599 | 643 | 633 | 727 | 826 |
| FFRDC's administered by universities | 155 | 171 | 189 | 187 | 179 | 163 | 139 | 150 | 145 | 150 |
| Other nonprofit institutions ^b | 153 | 182 | 180 | 183 | 208 | 205 | 226 | 250 | 280 | 305 |
| All other performers | 48 | 48 | 51 | 74 | 71 | 95 | 95 | 85 | 120 | 131 |

^a Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

^b Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-107. Federal obligations for development, by performer, fiscal years 1963-72

(Millions of dollars)

| Performer | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates | |
|---|-------|-------|-------|--------|--------|--------|--------|-------|-----------|--------|
| | | | | | | | | | 1971 | 1972 |
| Total | 8,454 | 9,761 | 9,760 | 10,050 | 11,256 | 10,557 | 10,398 | 9,728 | 9,392 | 10,018 |
| Federal intramural ^a | 1,250 | 1,546 | 1,639 | 1,728 | 1,822 | 1,782 | 1,726 | 1,843 | 1,827 | 1,916 |
| Industrial firms ^b | 6,780 | 7,657 | 7,524 | 7,645 | 8,756 | 8,038 | 7,878 | 7,014 | 6,720 | 7,252 |
| Universities and colleges | 44 | 87 | 77 | 99 | 106 | 105 | 127 | 121 | 146 | 158 |
| FFRDC's administered by universities | 221 | 239 | 224 | 244 | 239 | 297 | 328 | 332 | 334 | 342 |
| Other nonprofit institutions ^b | 157 | 213 | 274 | 310 | 307 | 314 | 310 | 398 | 331 | 314 |
| All other performers | 3 | 18 | 22 | 23 | 25 | 21 | 28 | 19 | 35 | 36 |

^a Federal intramural activities cover costs associated with the administration of intramural and extramural programs by Federal personnel as well as actual intramural performance.

^b Includes Federally Funded Research and Development Centers (FFRDC's) administered by this sector.

Table C-108. Federal obligations for total research, by field of science, fiscal years 1956-72

(Millions of dollars)

| Field of science | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|-------------------------------------|------|------|-------|-------|-------|-------|-------|
| | | | | | | | |
| Total, all fields | 852 | 925 | 1,079 | 1,403 | 1,941 | 2,620 | 3,273 |
| Life sciences | 208 | 292 | 342 | 417 | 511 | 629 | 810 |
| Psychology | (*) | (*) | (*) | 24 | 38 | 51 | 57 |
| Physical sciences | 246 | 263 | 334 | 464 | 608 | 860 | 1,029 |
| Environmental sciences ^b | 11 | 11 | 14 | 18 | 25 | 40 | 64 |
| Mathematics | 357 | 322 | 350 | 415 | 690 | 864 | 1,059 |
| Engineering | 30 | 36 | 40 | 31 | 35 | 45 | 63 |
| Social sciences | (*) | (*) | (*) | 33 | 33 | 132 | 190 |
| Other sciences | | | | | | | |

| Field of science | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates | |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|
| | | | | | | | | | 1971 | 1972 |
| Total, all fields | 4,041 | 4,464 | 4,854 | 5,271 | 5,273 | 5,365 | 5,239 | 5,602 | 5,995 | 6,544 |
| Life sciences | 922 | 1,045 | 1,167 | 1,301 | 1,451 | 1,537 | 1,501 | 1,533 | 1,735 | 1,945 |
| Psychology | 72 | 95 | 103 | 100 | 108 | 98 | 103 | 113 | 125 | 140 |
| Physical sciences | 1,339 | 1,602 | 1,705 | 1,830 | 1,074 | 1,131 | 1,169 | 1,010 | 1,025 | 1,085 |
| Environmental sciences ^b | 87 | 93 | 105 | 123 | 670 | 663 | 551 | 587 | 632 | 702 |
| Mathematics | 1,445 | 1,450 | 1,576 | 1,677 | 1,300 | 1,119 | 1,16 | 1,02 | 104 | 112 |
| Engineering | 80 | 102 | 127 | 166 | 1,555 | 1,569 | 1,499 | 1,968 | 2,014 | 2,198 |
| Social sciences | 97 | 77 | 70 | 74 | 1,189 | 1,195 | 220 | 216 | 273 | 311 |
| Other sciences | | | | | 95 | 53 | 80 | 72 | 86 | 149 |

^a Not available.

^b Physical sciences and environmental sciences not separately identified prior to 1967.

Table C-109. Federal obligations for basic research, by field of science, fiscal years 1956-72

[Millions of dollars]

| Field of science | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|-------------------------------------|------|------|------|------|------|------|-------|
| Total, all fields | 206 | 262 | 335 | 517 | 610 | 825 | 1,106 |
| Life sciences | 59 | 84 | 99 | 135 | 172 | 238 | 313 |
| Psychology | (*) | (*) | (*) | 9 | 17 | 21 | 28 |
| Physical sciences | 120 | 147 | 192 | 291 | 319 | 443 | 604 |
| Environmental sciences ^b | 6 | 7 | 11 | 14 | 18 | 21 | 26 |
| Mathematics | 17 | 19 | 25 | 58 | 76 | 82 | 116 |
| Engineering | 4 | 6 | 9 | 5 | 8 | 11 | 18 |
| Social sciences | (*) | (*) | (*) | 4 | (*) | 8 | 2 |
| Other sciences | | | | | | | |

| Field of science | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| | | | | | | | | | 1971 1972 |
| Total, all fields | 1,389 | 1,567 | 1,640 | 1,844 | 2,015 | 2,072 | 2,094 | 2,062 | 2,165 2,399 |
| Life sciences | 380 | 424 | 487 | 552 | 612 | 612 | 569 | 576 | 631 735 |
| Psychology | 36 | 47 | 58 | 53 | 60 | 55 | 55 | 57 | 60 66 |
| Physical sciences | 767 | 874 | 902 | 962 | 713 | 731 | 819 | 704 | 726 730 |
| Environmental sciences ^b | 42 | 52 | 57 | 60 | 321 | 351 | 319 | 352 | 362 419 |
| Mathematics | 137 | 135 | 147 | 168 | 65 | 67 | 57 | 59 | 53 58 |
| Engineering | 25 | 34 | 37 | 44 | 184 | 191 | 191 | 243 | 240 248 |
| Social sciences | 2 | 2 | 2 | 4 | 57 | 62 | 72 | 66 | 81 100 |
| Other sciences | | | | | 4 | 3 | 11 | 4 | 12 43 |

* Not available.

^b Physical sciences and environmental sciences not separately identified prior to 1967.

^c Less than \$500,000.

Table C-110. Federal obligations for applied research, by field of science, fiscal years 1956-72

[Millions of dollars]

| Field of science | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 |
|-------------------------------------|------|------|------|------|-------|-------|-------|
| Total, all fields | 646 | 662 | 744 | 886 | 1,331 | 1,796 | 2,166 |
| Life sciences | 149 | 208 | 243 | 282 | 340 | 391 | 498 |
| Psychology | (*) | (*) | (*) | 15 | 21 | 30 | 29 |
| Physical sciences | 126 | 116 | 142 | 173 | 289 | 417 | 425 |
| Environmental sciences ^b | 5 | 4 | 3 | 5 | 7 | 19 | 38 |
| Mathematics | 340 | 304 | 325 | 357 | 614 | 781 | 943 |
| Engineering | 26 | 30 | 31 | 26 | 27 | 34 | 45 |
| Social sciences | (*) | (*) | (*) | 28 | 33 | 124 | 189 |
| Other sciences | | | | | | | |

| Field of science | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | Estimates |
|-------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| | | | | | | | | | 1971 1972 |
| Total, all fields | 2,652 | 2,898 | 3,164 | 3,427 | 3,258 | 3,293 | 3,145 | 3,540 | 3,830 4,245 |
| Life sciences | 542 | 621 | 680 | 749 | 839 | 925 | 932 | 957 | 1,104 1,210 |
| Psychology | 35 | 48 | 46 | 47 | 48 | 43 | 49 | 56 | 65 74 |
| Physical sciences | 572 | 728 | 803 | 868 | 361 | 400 | 350 | 306 | 300 356 |
| Environmental sciences ^b | 45 | 41 | 48 | 62 | 349 | 312 | 232 | 234 | 271 283 |
| Mathematics | 1,308 | 1,316 | 1,429 | 1,510 | 1,371 | 1,378 | 1,307 | 1,725 | 1,774 1,950 |
| Engineering | 55 | 68 | 90 | 121 | 132 | 134 | 148 | 150 | 192 211 |
| Social sciences | 95 | 75 | 68 | 69 | 92 | 48 | 69 | 68 | 74 107 |
| Other sciences | | | | | | | | | |

* Not available.

^b Physical sciences and environmental sciences not separately identified prior to 1967.

Appendix D

statistical tables, part II

federal funds for scientific and technical information

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NOTES

- Source of data is the National Science Foundation.
- Estimates for 1972 are based on **The Budget, FY 1972**, as submitted to Congress, and do not reflect subsequent appropriation and apportionment actions.
- Obligations reported for extramural performance are limited to contracts or grants with private individuals or organizations outside the Government that have as their primary purpose the support of scientific and technical information. Excluded are obligations for information efforts that supplement or support work under R&D contracts or grants.
- Defense Agencies include the Advanced Research Projects Agency, the Defense Atomic Support Agency, the Defense Supply Agency, the Defense Intelligence Agency, and the Defense Communications Agency.
- Obligations for category 4, Research and Development in Information Sciences, Documentation and Information Systems, Techniques and Devices, are also reported under R&D obligations in part I.

- In addition to the amounts reported for category 4, the Department of Defense also reported under R&D obligations in part I \$11.3 million of its total for the three other information activities for 1970; \$109.8 million for 1971; and \$108.8 for 1972.
- In addition to the amounts reported for category 4 the National Institutes of Health of the Department of Health, Education, and Welfare also reported under R&D obligations in part I \$11.3 million of its total for the three other information activities for 1970; \$11.6 million for 1971; and \$11.6 million for 1972.
- The National Oceanic and Atmospheric Administration (NOAA) was established in fiscal year 1971 within the Department of Commerce. NOAA includes Commerce's Environmental Science Services Administration (ESSA), which is its largest component. It also has incorporated from Interior the Bureau of Commercial Fisheries, the marine sport fish activities of the Fish and Wildlife Service, and the Marine Minerals Technology Center of the Bureau of Mines. NOAA has taken over the Army Corps of Engineers' Great Lakes Survey and the Navy's National Oceanographic Data Center and National Oceanographic Instrumentation Center. From the Department of Transportation NOAA has taken the data buoy development activities of the Coast Guard and from the National Science Foundation, its Sea Grant Programs. These agency subdivisions' STIN activities are reported for fiscal year 1970 although they had been part of NOAA that year.

- In addition to the amounts reported for category 4, the Department of Defense also reported under R&D obligations in part I \$112.1 million of its total for the three other information activities for 1970; \$109.8 million for 1971; and \$108.8 for 1972.
- In addition to the amounts reported for category 4 the National Institutes of Health of the Department of Health, Education, and Welfare also reported under R&D obligations in part I \$11.3 million of its total for the three other information activities for 1970; \$11.6 million for 1971; and \$11.6 million for 1972.
- The National Oceanic and Atmospheric Administration (NOAA) was established in fiscal year 1971 within the Department of Commerce. NOAA includes Commerce's Environmental Science Services Administration (ESSA), which is its largest component. It also has incorporated from Interior the Bureau of Commercial Fisheries, the marine sport fish activities of the Fish and Wildlife Service, and the Marine Minerals Technology Center of the Bureau of Mines. NOAA has taken over the Army Corps of Engineers' Great Lakes Survey and the Navy's National Oceanographic Data Center and National Oceanographic Instrumentation Center. From the Department of Transportation NOAA has taken the data buoy development activities of the Coast Guard and from the National Science Foundation, its Sea Grant Programs. These agency subdivisions' STINFO activities are reported for fiscal year 1970 as though they had been part of NOAA that year.
- The Environmental Protection Agency (EPA) was established in fiscal year 1971. EPA combines a number of components formerly within HEW: the National Air Pollution Control Administration, the Bureau of Solid Waste Management, and the Bureau of Water Hygiene (all previously reported under the Environmental Health Service) and portions of the Bureau of Radiological Health and the pesticide control functions of the Food and Drug Administration. EPA also includes what was previously Interior's Federal Water Pollution Control Administration, the pesticide study functions of its Fish and Wildlife Service, and the Gulf Breeze (Fla.) Biological Laboratory of its Bureau of Commercial Fisheries. In addition, EPA has taken over from the Atomic Energy Commission its environmental radiation standard-setting authority and the pesticides registration program of the Department of Agriculture's Agricultural Research Service. These agency subdivisions' STINFO activities are reported for fiscal year 1970 as though they had been part of EPA that year.

TABLE D-1. SUMMARY OF FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION,
FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

| ACTIVITY | ACTUAL, 1970 | | | ESTIMATES | | | | | |
|---|--------------|-------------|-------------|-----------|-------------|-------------|---------|-------------|-------------|
| | TOTAL | INTRA-MURAL | EXTRA-MURAL | 1971 | | | 1972 | | |
| | | | | TOTAL | INTRA-MURAL | EXTRA-MURAL | TOTAL | INTRA-MURAL | EXTRA-MURAL |
| TOTAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION..... | 386,783 | 262,978 | 123,805 | 400,408 | 268,142 | 132,266 | 413,049 | 277,859 | 135,190 |
| PUBLICATION AND DISTRIBUTION..... | 98,937 | 78,240 | 20,697 | 107,073 | 86,435 | 20,638 | 110,702 | 89,853 | 20,849 |
| PUBLICATION AND DISTRIBUTION..... | 92,367 | 75,159 | 17,208 | 99,846 | 83,165 | 16,681 | 103,850 | 86,453 | 17,397 |
| SUPPORT OF PUBLICATIONS..... | 6,570 | 3,081 | 3,489 | 7,227 | 3,240 | 3,987 | 6,852 | 3,400 | 3,452 |
| DOCUMENTATION, REFERENCE AND INFORMATION SERVICES..... | 193,141 | 144,622 | 48,519 | 190,515 | 140,217 | 50,298 | 191,238 | 143,971 | 47,267 |
| BIBLIOGRAPHIC AND REFERENCE SERVICES... | 156,012 | 128,731 | 27,281 | 153,900 | 123,806 | 30,094 | 155,981 | 126,573 | 29,408 |
| SPECIALIZED INFORMATION CENTERS..... | 31,492 | 14,519 | 16,973 | 30,905 | 14,927 | 15,978 | 30,295 | 15,790 | 14,505 |
| TRANSLATIONS..... | 5,637 | 1,372 | 4,265 | 5,710 | 1,484 | 4,226 | 4,962 | 1,608 | 3,354 |
| SYMPOSIA AND AUDIO/VISUAL MEDIA..... | 32,576 | 23,463 | 9,113 | 35,346 | 24,399 | 11,337 | 36,674 | 24,372 | 12,302 |
| SYMPOSIA AND TECHNICAL MEETINGS..... | 21,447 | 15,992 | 5,455 | 22,005 | 16,376 | 5,629 | 22,708 | 16,636 | 6,072 |
| AUDIO/VISUAL MEDIA AND OTHER FORMS OF ORAL COMMUNICATION..... | 11,129 | 7,471 | 3,658 | 13,341 | 7,633 | 5,708 | 13,966 | 7,736 | 6,230 |
| RESEARCH AND DEVELOPMENT IN INFORMATION SCIENCES, DOCUMENTATION AND INFORMATION SYSTEMS, TECHNIQUES AND DEVICES | 62,129 | 16,653 | 45,476 | 67,474 | 17,511 | 49,963 | 74,435 | 19,663 | 54,772 |

TABLE D-2. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY,
FISCAL YEARS 1970, 1971, AND 1972
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | ESTIMATES | |
|--|--------------|-----------|---------|
| | | 1971 | 1972 |
| TOTAL, ALL AGENCIES..... | 366,783 | 400,428 | 413,049 |
| DEPARTMENTS | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 9,753 | 10,700 | 10,547 |
| AGRICULTURAL RESEARCH SERVICE..... | 3,182 | 3,379 | 3,379 |
| COOPERATIVE STATE RESEARCH SERVICE..... | 128 | 124 | 124 |
| ECONOMIC RESEARCH SERVICE..... | 313 | 387 | 392 |
| FARMER COOPERATIVE SERVICE..... | 69 | 48 | 50 |
| FOREST SERVICE..... | 2,498 | 2,677 | 2,699 |
| NATIONAL AGRICULTURAL LIBRARY..... | 3,557 | 4,078 | 3,895 |
| STATISTICAL REPORTING SERVICE..... | 6 | 7 | 8 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 60,300 | 58,404 | 71,850 |
| BUREAU OF THE CENSUS..... | 379 | 469 | 469 |
| NATIONAL BUREAU OF STANDARDS..... | 10,522 | 11,165 | 12,023 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 2,804 | 3,940 | 4,282 |
| OFFICE OF BUSINESS ECONOMICS..... | 150 | 180 | 190 |
| OFFICE OF TELECOMMUNICATIONS..... | - | 28 | 162 |
| PATENT OFFICE..... | 46,445 | 52,622 | 5,724 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 145,204 | 147,258 | 149,954 |
| DEPARTMENT OF THE ARMY..... | 68,770 | 69,807 | 69,755 |
| DEPARTMENT OF THE NAVY..... | 15,905 | 16,247 | 16,850 |
| DEPARTMENT OF THE AIR FORCE..... | 21,071 | 18,513 | 17,220 |
| DEFENSE AGENCIES..... | 39,443 | 42,676 | 46,114 |
| DEPARTMENT-WIDE FUNDS..... | 15 | 15 | 15 |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 66,042 | 72,350 | 67,866 |
| FOOD AND DRUG ADMINISTRATION..... | 5,357 | 5,367 | 5,636 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 8,233 | 8,859 | 9,955 |
| NATIONAL INSTITUTES OF HEALTH..... | 36,892 | 40,143 | 40,179 |
| OFFICE OF EDUCATION..... | 15,222 | 17,649 | 11,730 |
| SOCIAL SECURITY ADMINISTRATION..... | 345 | 332 | 366 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 12,696 | 13,551 | 13,987 |
| BUREAU OF MINES..... | 821 | 834 | 841 |
| BUREAU OF OUTDOOR RECREATION..... | 16 | 19 | 21 |
| BUREAU OF RECLAMATION..... | 519 | 510 | 503 |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | 798 | 768 | 813 |
| OFFICE OF LIBRARY SERVICES..... | 950 | 912 | 912 |
| GEOLOGICAL SURVEY..... | 8,864 | 9,538 | 9,823 |
| OFFICE OF COAL RESEARCH..... | 15 | 18 | 22 |
| OFFICE OF SALINE WATER..... | 197 | 136 | 140 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 516 | 816 | 912 |
| DEPARTMENT OF JUSTICE, TOTAL..... | | | |

| DEPARTMENT OF COMMERCE, TOTAL..... | 60-300 | 68,404 | 71,850 |
|--|---------|---------|---------|
| BUREAU OF THE CENSUS..... | 379 | 469 | 469 |
| NATIONAL BUREAU OF STANDARDS..... | 10,522 | 11,165 | 12,023 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 2,804 | 3,940 | 4,282 |
| OFFICE OF BUSINESS ECONOMICS..... | 150 | 180 | 190 |
| OFFICE OF TELECOMMUNICATIONS..... | - | 28 | 162 |
| PATENT OFFICE..... | 46,445 | 52,622 | 54,724 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 145,204 | 147,258 | 149,954 |
| DEPARTMENT OF THE ARMY..... | 68,770 | 69,807 | 69,755 |
| DEPARTMENT OF THE NAVY..... | 15,905 | 16,247 | 16,850 |
| DEPARTMENT OF THE AIR FORCE..... | 21,071 | 18,513 | 17,220 |
| DEFENSE AGENCIES..... | 39,443 | 42,676 | 46,114 |
| DEPARTMENT-WIDE FUNDS..... | 15 | 15 | 15 |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 66,042 | 72,350 | 67,866 |
| FOOD AND DRUG ADMINISTRATION..... | 5,350 | 5,367 | 5,636 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 8,233 | 8,959 | 9,955 |
| NATIONAL INSTITUTES OF HEALTH..... | 36,892 | 40,143 | 40,179 |
| OFFICE OF EDUCATION..... | 15,222 | 17,649 | 11,730 |
| SOCIAL SECURITY ADMINISTRATION..... | 345 | 332 | 366 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 12,696 | 13,551 | 13,987 |
| BUREAU OF MINES..... | 821 | 834 | 841 |
| BUREAU OF OUTDOOR RECREATION..... | 16 | 19 | 21 |
| BUREAU OF RECLAMATION..... | 519 | 510 | 503 |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | 798 | 768 | 813 |
| OFFICE OF LIBRARY SERVICES..... | 950 | 912 | 912 |
| GEOLOGICAL SURVEY..... | 8,864 | 9,538 | 9,823 |
| OFFICE OF COAL RESEARCH..... | 15 | 18 | 22 |
| OFFICE OF SALINE WATER..... | 197 | 126 | 140 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 516 | 816 | 912 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 33 | 50 | 50 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | 33 | 50 | 50 |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 132 | 132 |
| MANPOWER ADMINISTRATION..... | 132 | 132 | 132 |
| POSTAL SERVICE..... | 96 | 32 | - |
| DEPARTMENT OF STATE, TOTAL..... | 10,247 | 2,273 | 2,219 |
| DEPARTMENTAL FUNDS..... | 81 | 107 | 107 |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 10,166 | 2,166 | 2,212 |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 3,295 | 3,876 | 4,460 |
| FEDERAL AVIATION ADMINISTRATION..... | 433 | 486 | 546 |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,388 | 1,435 | 1,460 |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION..... | 529 | 341 | 493 |
| OFFICE OF THE SECRETARY..... | 545 | 1,198 | 1,545 |
| UNITED STATES COAST GUARD..... | 70 | 416 | 416 |
| OTHER AGENCIES | 62 | 62 | 55 |
| ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS..... | 4,589 | 4,923 | 4,970 |
| ATOMIC ENERGY COMMISSION..... | 2,411 | 3,147 | 3,087 |
| ENVIRONMENTAL PROTECTION AGENCY..... | 16 | 16 | 17 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 31 | 32 | 33 |
| FEDERAL HOME LOAN BANK BOARD..... | 22,083 | 22,992 | 32,444 |
| LIBRARY OF CONGRESS..... | 26,547 | 26,894 | 27,877 |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 14,857 | 15,037 | 12,582 |
| NATIONAL SCIENCE FOUNDATION..... | 8 | 8 | 3 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 120 | 140 | 150 |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 3 | - | 5 |
| SMALL BUSINESS ADMINISTRATION..... | 1,934 | 2,064 | 4,064 |
| SMITHSONIAN INSTITUTION..... | 110 | 116 | 123 |
| TENNESSEE VALLEY AUTHORITY..... | 214 | 241 | 274 |
| UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY..... | 6,000 | 6,100 | 6,200 |
| VETERANS ADMINISTRATION..... | | | |

TABLE D-3. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY, FISCAL YEARS 1970, 1971, AND 1972

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | INTRAMURAL | | EXTRAMURAL | |
|--|--------------|-----------------|--------------|-----------------|
| | ACTUAL, 1970 | ESTIMATES | ACTUAL, 1970 | ESTIMATES |
| | | 1971 1972 | | 1971 1972 |
| TOTAL, ALL AGENCIES..... | 262,978 | 268,142 277,859 | 123,805 | 132,266 135,190 |
| DEPARTMENTS | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 9,576 | 10,340 10,184 | 177 | 360 363 |
| AGRICULTURAL RESEARCH SERVICE..... | 3,182 | 3,379 3,379 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 128 | 124 124 | - | - |
| ECONOMIC RESEARCH SERVICE..... | 313 | 387 392 | - | - |
| FARMER COOPERATIVE SERVICE..... | 69 | 48 50 | - | - |
| FOREST SERVICE..... | 2,498 | 2,677 2,699 | - | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 3,380 | 3,718 3,532 | 177 | 360 363 |
| STATISTICAL REPORTING SERVICE..... | 6 | 7 8 | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 59,670 | 67,288 70,756 | 630 | 1,116 1,094 |
| BUREAU OF THE CENSUS..... | 367 | 457 457 | 12 | 12 12 |
| NATIONAL BUREAU OF STANDARDS..... | 9,932 | 10,558 11,407 | 590 | 607 616 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 2,779 | 3,443 3,816 | 25 | 497 466 |
| OFFICE OF BUSINESS ECONOMICS..... | 150 | 180 190 | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | - | 28 162 | - | - |
| PATENT OFFICE..... | 46,442 | 52,622 54,724 | 3 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 86,155 | 85,079 85,709 | 59,049 | 62,180 64,245 |
| DEPARTMENT OF THE ARMY..... | 55,240 | 55,989 55,740 | 13,530 | 13,818 14,015 |
| DEPARTMENT OF THE NAVY..... | 7,779 | 8,010 8,170 | 8,126 | 8,237 8,680 |
| DEPARTMENT OF THE AIR FORCE..... | 9,064 | 8,868 9,268 | 12,007 | 9,645 7,952 |
| DEFENSE AGENCIES..... | 1,072 | 12,211 12,531 | 25,371 | 30,465 33,583 |
| DEPARTMENT-WIDE FUNDS..... | - | - | 15 | 15 15 |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 34,616 | 37,473 30,795 | 31,426 | 34,877 37,071 |
| FOOD AND DRUG ADMINISTRATION..... | 2,315 | 2,332 2,449 | 3,035 | 3,035 3,187 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 3,236 | 3,538 3,541 | 4,997 | 5,321 6,414 |
| NATIONAL INSTITUTES OF HEALTH..... | 22,019 | 23,493 23,519 | 14,873 | 16,650 16,660 |
| OFFICE OF EDUCATION..... | 6,701 | 7,778 920 | 8,521 | 9,871 10,810 |
| SOCIAL SECURITY ADMINISTRATION..... | 345 | 332 366 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 12,387 | 13,063 13,532 | 309 | 488 455 |
| BUREAU OF MINES..... | 821 | 834 841 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 16 | 19 21 | - | - |
| BUREAU OF RECLAMATION..... | 509 | 497 490 | 10 | 13 13 |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | 671 | 633 678 | 127 | 135 135 |
| OFFICE OF LIBRARY SERVICES..... | 950 | 912 912 | - | - |
| GEOLOGICAL SURVEY..... | 8,864 | 9,538 9,823 | - | - |
| OFFICE OF COAL RESEARCH..... | - | - | 15 | 18 22 |
| OFFICE OF SALINE WATER..... | 165 | 101 105 | 32 | 35 35 |
| OFFICE OF WATER RESOURCES RESEARCH..... | 391 | 529 662 | 125 | 287 250 |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | 33 | 50 50 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | - | - | 33 | 50 50 |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 132 132 | - | - |
| MANPOWER ADMINISTRATION..... | 132 | 132 132 | - | - |
| POSTAL SERVICE..... | 2 | 2 2 | 94 | 30 30 |

| BUREAU OF THE CENSUS | | | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--|--|--|
| NATIONAL BUREAU OF STANDARDS..... | 9,932 | 10,558 | 11,407 | 590 | 507 | 616 | | | |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 2,779 | 3,443 | 3,816 | 25 | 497 | 466 | | | |
| OFFICE OF BUSINESS ECONOMICS..... | 150 | 180 | 190 | - | - | - | | | |
| OFFICE OF TELECOMMUNICATIONS..... | - | 28 | 162 | - | - | - | | | |
| PATENT OFFICE..... | 46,442 | 52,622 | 54,724 | 3 | - | - | | | |
| DEPARTMENT OF DEFENSE, TOTAL..... | 86,155 | 85,078 | 85,709 | 59,049 | 62,180 | 64,245 | | | |
| DEPARTMENT OF THE ARMY..... | 55,240 | 55,989 | 55,740 | 13,530 | 13,818 | 14,015 | | | |
| DEPARTMENT OF THE NAVY..... | 7,779 | 8,010 | 8,170 | 8,126 | 8,237 | 8,680 | | | |
| DEPARTMENT OF THE AIR FORCE..... | 9,064 | 8,868 | 9,268 | 12,007 | 9,645 | 7,952 | | | |
| DEFENSE AGENCIES..... | 14,072 | 12,211 | 12,531 | 25,371 | 30,465 | 33,583 | | | |
| DEPARTMENT-WIDE FUNDS..... | - | - | - | 15 | 15 | 15 | | | |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 34,616 | 37,473 | 30,795 | 31,426 | 34,877 | 37,071 | | | |
| FOOD AND DRUG ADMINISTRATION..... | 2,315 | 2,332 | 2,449 | 3,035 | 3,035 | 3,187 | | | |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 3,236 | 3,538 | 3,541 | 4,997 | 5,321 | 6,414 | | | |
| NATIONAL INSTITUTES OF HEALTH..... | 22,019 | 23,493 | 23,519 | 14,873 | 16,650 | 16,660 | | | |
| OFFICE OF EDUCATION..... | 6,701 | 7,776 | 9,200 | 8,521 | 9,871 | 10,810 | | | |
| SOCIAL SECURITY ADMINISTRATION..... | 345 | 332 | 366 | - | - | - | | | |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 12,387 | 13,063 | 13,532 | 309 | 488 | 455 | | | |
| BUREAU OF MINES..... | 821 | 834 | 841 | - | - | - | | | |
| BUREAU OF OUTDOOR RECREATION..... | 16 | 19 | 21 | - | - | - | | | |
| BUREAU OF RECLAMATION..... | 509 | 497 | 490 | 10 | 13 | 13 | | | |
| BUREAU OF SPORT FISHERIES AND WILDLIFE..... | 671 | 633 | 678 | 127 | 135 | 135 | | | |
| OFFICE OF LIBRARY SERVICES..... | 950 | 912 | 912 | - | - | - | | | |
| GEOLOGICAL SURVEY..... | 8,864 | 9,538 | 9,823 | - | - | - | | | |
| OFFICE OF COAL RESEARCH..... | - | - | - | 15 | 18 | 22 | | | |
| OFFICE OF SALINE WATER..... | 165 | 101 | 105 | 32 | 35 | 35 | | | |
| OFFICE OF WATER RESOURCES RESEARCH..... | 391 | 525 | 662 | 125 | 287 | 250 | | | |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | 33 | 50 | 50 | | | |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | - | - | - | 33 | 50 | 50 | | | |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 132 | 132 | - | - | - | | | |
| MANPOWER ADMINISTRATION..... | 132 | 132 | 132 | - | - | - | | | |
| POSTAL SERVICE..... | 2 | 2 | - | 94 | 30 | - | | | |
| DEPARTMENT OF STATE, TOTAL..... | 9,664 | 1,663 | 1,663 | 583 | 610 | 656 | | | |
| DEPARTMENTAL FUNDS..... | 81 | 107 | 107 | - | - | - | | | |
| AGENCY FOR INTERNATIONAL DEVELOPMENT..... | 9,583 | 1,556 | 1,556 | 583 | 610 | 656 | | | |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 2,044 | 2,331 | 2,878 | 1,251 | 1,545 | 1,582 | | | |
| FEDERAL AVIATION ADMINISTRATION..... | 412 | 410 | 467 | 21 | 75 | 79 | | | |
| FEDERAL HIGHWAY ADMINISTRATION..... | 330 | 355 | 375 | 1,058 | 1,080 | 1,085 | | | |
| NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION..... | 362 | 205 | 205 | 167 | 136 | 288 | | | |
| OFFICE OF THE SECRETARY..... | 540 | 945 | 1,415 | 5 | 253 | 130 | | | |
| UNITED STATES COAST GUARD..... | 400 | 416 | 416 | - | - | - | | | |
| OTHER AGENCIES | | | | | | | | | |
| ADVISORY COMMISSION ON INTERGOVERNMENTAL RELATIONS..... | 62 | 62 | 55 | - | - | - | | | |
| ATOMIC ENERGY COMMISSION..... | 2,917 | 3,121 | 3,209 | 1,672 | 1,812 | 1,761 | | | |
| ENVIRONMENTAL PROTECTION AGENCY..... | 1,629 | 1,789 | 2,059 | 782 | 1,358 | 1,028 | | | |
| FEDERAL COMMUNICATIONS COMMISSION..... | 16 | 16 | 17 | - | - | - | | | |
| FEDERAL HOME LOAN BANK BOARD..... | 31 | 32 | 33 | - | - | - | | | |
| LIBRARY OF CONGRESS..... | 22,040 | 22,922 | 32,444 | 43 | - | - | | | |
| NATIONAL AERONAUTICS AND SPACE ADMINISTRATION..... | 12,676 | 12,936 | 13,759 | 13,871 | 13,958 | 14,118 | | | |
| NATIONAL SCIENCE FOUNDATION..... | 1,042 | 1,230 | 1,330 | 13,815 | 13,807 | 11,772 | | | |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 3 | 3 | 3 | 5 | 5 | - | | | |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 120 | 140 | 150 | - | - | - | | | |
| SMALL BUSINESS ADMINISTRATION..... | 3 | - | 5 | - | - | - | | | |
| SMITHSONIAN INSTITUTION..... | 1,009 | 2,034 | 2,589 | 25 | 30 | 1,475 | | | |
| TENNESSEE VALLEY AUTHORITY..... | 110 | 116 | 123 | - | - | - | | | |
| UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY..... | 214 | 241 | 274 | - | - | - | | | |
| VETERANS ADMINISTRATION..... | 5,960 | 6,060 | 6,160 | 40 | 40 | 40 | | | |

TABLE D-4. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY,
FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | PUBLICATION AND DISTRIBUTION | | | DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES | | | | SYMPOSIA AND AUDIO/VISUAL MEDIA | | | RED IN INFO. SCIENCE |
|---|---------|------------------------------|----------------------------|-------------------------|--|---------------------------|---------------------------|--------------|---------------------------------|-----------|----------------------------|----------------------|
| | | TOTAL | PUBLICATION & DISTRIBUTION | SUPPORT OF PUBLICATIONS | TOTAL | BIBLIOGRAPHIC & REFERENCE | SPECIALIZED INFO. CENTERS | TRANSLATIONS | TOTAL | SYM-POSIA | AUDIO/VISUAL MEDIA & OTHER | |
| TOTAL, ALL AGENCIES..... | 386,783 | 98,937 | 92,367 | 6,570 | 193,141 | 156,012 | 31,492 | 5,637 | 32,576 | 21,447 | 11,129 | 62,129 |
| DEPARTMENTS | | | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL... | 9,753 | 3,499 | 3,311 | 188 | 4,242 | 4,240 | - | 2 | 1,793 | 1,798 | 85 | 219 |
| AGRICULTURAL RESEARCH SERVICE..... | 3,182 | 1,703 | 1,525 | 178 | 732 | 730 | - | 2 | 747 | 747 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 128 | 9 | 9 | - | - | - | - | - | 118 | 118 | - | 1 |
| ECONOMIC RESEARCH SERVICE..... | 313 | 268 | 268 | - | 2 | 2 | - | - | 43 | 43 | - | - |
| FARMER COOPERATIVE SERVICE..... | 69 | 69 | 69 | - | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 2,498 | 1,217 | 1,207 | 10 | 395 | 395 | - | - | 876 | 791 | 85 | 10 |
| NATIONAL AGRICULTURAL LIBRARY..... | 3,557 | 227 | 227 | - | 3,113 | 3,113 | - | - | 9 | 9 | - | 208 |
| STATISTICAL REPORTING SERVICE..... | 6 | 6 | 6 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 60,300 | 40,302 | 40,239 | 63 | 18,120 | 14,333 | 3,541 | 246 | 609 | 481 | 128 | 1,269 |
| BUREAU OF THE CENSUS..... | 379 | 158 | 158 | - | 54 | 26 | 28 | - | 39 | 39 | - | 128 |
| NATIONAL BUREAU OF STANDARDS..... | 10,522 | 1,125 | 1,062 | 63 | 8,266 | 4,952 | 3,292 | 22 | 431 | 303 | 128 | 700 |
| NATIONAL OCEANIC AND ATMOS. ADMIN. | 2,804 | 1,603 | 1,603 | - | 1,018 | 717 | 221 | 80 | 135 | 139 | - | 44 |
| OFFICE OF BUSINESS ECONOMICS..... | 150 | 150 | 150 | - | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | 46,445 | 37,266 | 37,266 | - | 8,782 | 8,638 | - | 144 | - | - | - | 397 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 145,204 | 26,582 | 24,977 | 1,605 | 67,459 | 58,485 | 7,893 | 1,081 | 18,039 | 12,553 | 5,486 | 33,124 |
| DEPARTMENT OF THE ARMY..... | 68,770 | 12,206 | 10,858 | 1,348 | 43,390 | 41,320 | 1,377 | 693 | 11,816 | 9,015 | 2,801 | 1,358 |
| DEPARTMENT OF THE NAVY..... | 15,905 | 4,568 | 4,458 | 90 | 5,641 | 3,469 | 1,892 | 290 | 3,284 | 2,861 | 423 | 2,432 |
| DEPARTMENT OF THE AIR FORCE..... | 21,071 | 8,887 | 8,776 | 111 | 5,331 | 2,342 | 2,891 | 98 | 2,699 | 665 | 2,034 | 4,154 |
| DEFENSE AGENCIES..... | 39,443 | 941 | 885 | 56 | 13,082 | 11,354 | 1,728 | - | 240 | 12 | 228 | 25,180 |
| DEPARTMENT-WIDE FUNDS..... | 15 | - | - | - | 15 | - | 15 | - | - | - | - | - |
| DEPT HEALTH, ED, & WELFARE, TOTAL... | 66,042 | 5,439 | 3,552 | 1,887 | 41,139 | 27,250 | 12,791 | 1,098 | 4,350 | 2,442 | 1,908 | 15,114 |
| FOOD AND DRUG ADMINISTRATION..... | 5,350 | 350 | 315 | 35 | 4,815 | 670 | 4,135 | 10 | 60 | 6 | 54 | 125 |
| HEALTH SERV & MENTAL HEALTH ADM.... | 8,233 | 1,762 | 1,562 | 200 | 2,676 | 337 | 2,265 | 74 | 1,186 | 336 | 850 | 2,609 |
| NATIONAL INSTITUTES OF HEALTH..... | 36,892 | 3,002 | 1,350 | 1,652 | 21,017 | 17,436 | 2,567 | 1,014 | 2,727 | 1,953 | 774 | 10,146 |
| OFFICE OF EDUCATION..... | 15,222 | 48 | 48 | - | 12,631 | 8,807 | 3,824 | - | 309 | 79 | 230 | 2,234 |
| SOCIAL SECURITY ADMINISTRATION..... | 345 | 277 | 277 | - | - | - | - | - | 68 | 68 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL... | 12,696 | 6,193 | 6,191 | 2 | 4,689 | 3,801 | 827 | 61 | 544 | 538 | 6 | 1,270 |
| BUREAU OF MINES..... | 821 | 483 | 483 | - | 241 | 241 | - | - | 97 | 97 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 16 | 9 | 7 | 2 | 7 | - | 7 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 519 | 56 | 56 | - | 420 | 204 | 200 | 16 | 28 | 28 | - | 15 |
| BUREAU OF SPORT FISH & WILDLIFE... | 798 | 318 | 318 | - | 310 | 310 | - | - | 150 | 150 | - | - |

| | | | | | | | | | | | | | |
|---|---------|--------|--------|-------|--------|--------|--------|-------|--------|--------|-------|--------|-----|
| AGRICULTURAL RESEARCH SERVICE..... | 3,182 | 1,703 | 1,525 | 178 | 732 | 730 | - | - | 2 | 747 | 747 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 128 | 9 | 9 | - | - | - | - | - | - | 118 | 118 | - | 1 |
| ECONOMIC RESEARCH SERVICE..... | 313 | 268 | 268 | - | 2 | 2 | - | - | - | 43 | 43 | - | - |
| FARMER COOPERATIVE SERVICE..... | 69 | 69 | 69 | - | - | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 2,498 | 1,207 | 1,207 | 10 | 395 | 395 | - | - | - | 876 | 791 | 85 | 10 |
| NATIONAL AGRICULTURAL LIBRARY..... | 3,557 | 227 | 227 | - | 3,113 | 3,113 | - | - | - | 9 | 9 | - | 208 |
| STATISTICAL REPORTING SERVICE..... | 6 | 6 | 6 | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 60,300 | 40,302 | 40,239 | 63 | 18,120 | 14,333 | 3,541 | 246 | 609 | 481 | 128 | 1,269 | - |
| BUREAU OF THE CENSUS..... | 379 | 158 | 158 | - | 54 | 26 | 28 | - | 39 | 39 | - | 128 | - |
| NATIONAL BUREAU OF STANDARDS..... | 10,522 | 1,125 | 1,062 | 63 | 8,266 | 4,952 | 3,292 | 22 | 431 | 303 | 128 | 700 | - |
| NATIONAL OCEANIC AND ATMOS. ADMIN. | 2,804 | 1,603 | 1,603 | - | 1,018 | 717 | 221 | 80 | 139 | 139 | - | 44 | - |
| OFFICE OF BUSINESS ECONOMICS..... | 46,445 | 37,266 | 37,266 | - | 8,782 | 8,638 | - | 144 | - | - | - | 397 | - |
| PATENT OFFICE..... | 145,204 | 26,582 | 24,977 | 1,605 | 67,459 | 58,485 | 7,893 | 1,081 | 18,039 | 12,553 | 5,486 | 33,124 | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 68,770 | 12,206 | 10,858 | 1,348 | 43,390 | 41,320 | 1,377 | 693 | 11,816 | 9,015 | 2,801 | 1,358 | - |
| DEPARTMENT OF THE ARMY..... | 15,905 | 4,548 | 4,458 | 90 | 5,641 | 3,469 | 1,882 | 290 | 3,284 | 2,861 | 423 | 2,432 | - |
| DEPARTMENT OF THE NAVY..... | 21,071 | 8,887 | 8,776 | 111 | 5,331 | 2,342 | 2,891 | 98 | 2,699 | 665 | 2,034 | 4,154 | - |
| DEPARTMENT OF THE AIR FORCE..... | 39,443 | 941 | 885 | 56 | 13,082 | 11,354 | 1,728 | - | 240 | 12 | 228 | 25,180 | - |
| DEFENSE AGENCIES..... | 15 | - | - | - | 15 | - | 15 | - | - | - | - | - | - |
| DEPARTMENT-WIDE FUNDS..... | 66,042 | 5,439 | 3,552 | 1,887 | 41,139 | 27,250 | 12,791 | 1,098 | 4,350 | 2,442 | 1,908 | 15,114 | - |
| DEPT HEALTH, ED, & WELFARE, TOTAL..... | 5,350 | 350 | 315 | 35 | 4,815 | 670 | 4,135 | 10 | 60 | 6 | 54 | 125 | - |
| FOOD AND DRUG ADMINISTRATION..... | 8,233 | 1,762 | 1,562 | 200 | 2,676 | 337 | 2,265 | 74 | 1,186 | 336 | 850 | 2,609 | - |
| HEALTH SERV & MENTAL HEALTH ADM..... | 36,892 | 3,002 | 1,350 | 1,652 | 21,017 | 17,436 | 2,567 | 1,014 | 2,727 | 1,953 | 774 | 10,146 | - |
| NATIONAL INSTITUTES OF HEALTH..... | 15,222 | 48 | 48 | - | 12,631 | 8,807 | 3,824 | - | 309 | 79 | 230 | 2,234 | - |
| OFFICE OF EDUCATION..... | 345 | 277 | 277 | - | - | - | - | - | 68 | 68 | - | - | - |
| SOCIAL SECURITY ADMINISTRATION..... | 12,696 | 6,193 | 6,191 | 2 | 4,689 | 3,801 | 827 | 61 | 544 | 538 | 6 | 1,270 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 821 | 483 | 483 | - | 241 | 241 | - | - | 97 | 97 | - | - | - |
| BUREAU OF MINES..... | 16 | 9 | 7 | 2 | 7 | - | 7 | - | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 519 | 56 | 56 | - | 420 | 204 | 200 | 16 | 28 | 28 | - | 15 | - |
| BUREAU OF RECLAMATION..... | 950 | 338 | 338 | - | 310 | 310 | - | 6 | 150 | 150 | - | - | - |
| BUREAU OF SPORT FISH & WILDLIFE..... | 8,864 | 5,203 | 5,203 | - | 947 | 941 | 530 | 19 | 248 | 248 | - | 1,255 | - |
| OFFICE OF LIBRARY SERVICES..... | 15 | 15 | 15 | - | 2,158 | 1,589 | 90 | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 197 | 89 | 89 | - | 516 | 516 | - | - | 18 | 12 | 6 | - | - |
| OFFICE OF COAL RESEARCH..... | 516 | - | - | - | - | - | - | - | - | - | - | - | - |
| OFFICE OF SALINE WATER..... | 33 | - | - | - | - | - | - | - | 33 | 33 | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 33 | - | - | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 33 | - | - | - | - | - | - | - | - | - | - | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 33 | - | - | - | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 92 | 92 | - | 40 | 40 | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 132 | 92 | 92 | - | 40 | 40 | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 96 | - | - | - | - | - | - | - | - | - | - | - | 96 |
| DEPARTMENT OF STATE, TOTAL..... | 10,247 | 578 | - | 578 | 9,664 | 9,664 | - | - | 5 | 5 | - | - | - |
| DEPARTMENTAL FUNDS..... | 81 | - | - | - | 81 | 81 | - | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOP..... | 10,166 | 578 | - | 578 | 9,583 | 9,583 | - | - | 5 | 5 | - | - | - |
| DEPT. OF TRANSPORTATION, TOTAL..... | 3,295 | 238 | 238 | - | 2,999 | 610 | 2,380 | - | 58 | 53 | 5 | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 433 | 47 | 47 | - | 358 | 358 | - | - | 28 | 23 | 5 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,388 | 155 | 155 | - | 1,03 | 150 | 1,053 | - | 30 | 30 | - | - | - |
| NAT'L HIGHWAY TRAFFIC SAFETY ADMIN | 529 | 31 | 31 | - | 498 | 102 | 396 | - | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 545 | 5 | 5 | - | 540 | - | 540 | - | - | - | - | - | - |
| UNITED STATES COAST GUARD..... | 400 | - | - | - | 400 | - | 400 | - | - | - | - | - | - |
| OTHER AGENCIES | 62 | 44 | 44 | - | 17 | 17 | - | - | 1 | 1 | - | - | - |
| ADVIS COMM ON INTERGOVT RELATIONS..... | 4,589 | 2,339 | 2,339 | - | 2,225 | 2,225 | - | - | 25 | 25 | - | - | - |
| ATOMIC ENERGY COMMISSION..... | 2,411 | 924 | 913 | 11 | 925 | 16 | 872 | 37 | 291 | 207 | 84 | 271 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 16 | 5 | 5 | - | 5 | 5 | - | - | 6 | 6 | - | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | 31 | - | - | - | 31 | 31 | - | - | 12 | 12 | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 22,083 | - | - | - | 20,139 | 20,139 | - | - | 3,906 | 1,854 | 2,052 | 1,932 | - |
| NATIONAL AERONAUTICS & SPACE ADMIN | 26,547 | 10,219 | 8,769 | 1,450 | 11,392 | 8,039 | 3,152 | 201 | 648 | 648 | - | 1,030 | - |
| NATIONAL SCIENCE FOUNDATION..... | 14,857 | 546 | - | 546 | 6,229 | 3,353 | - | 2,876 | 5 | 5 | - | 7,434 | - |
| OFFICE OF ENERGY PREPARATION..... | 8 | - | - | - | 3 | 3 | - | - | 10 | 5 | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 120 | 30 | 20 | 10 | 60 | 40 | 10 | 10 | 10 | 5 | 5 | 20 | - |
| SMALL BUSINESS ADMINISTRATION..... | 1,934 | 1,113 | 1,113 | 20 | 606 | 581 | - | - | 115 | 115 | - | - | - |
| SMITHSONIAN INSTITUTION..... | 110 | - | - | - | 110 | 110 | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 214 | 166 | 6 | 160 | 47 | 30 | 17 | - | 1 | 1 | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGCY | 6,000 | 605 | 555 | 50 | 3,000 | 3,000 | - | - | 2,125 | 755 | 1,370 | - | - |
| VETERANS ADMINISTRATION..... | - | - | - | - | - | - | - | - | - | - | - | - | 770 |

TABLE D-5. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1971 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | PUBLICATION AND DISTRIBUTION | | SUPPORT OF PUBLICATIONS | DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES | | | SYMPOSA AND AUDIO/VISUAL MEDIA | | | RED IN INFO. SCIENCE | |
|---|---------|------------------------------|----------------------------|-------------------------|--|---------------------------|---------------------------|--------------------------------|--------|---------|----------------------|-----------------------------|
| | | TOTAL | PUBLICATION & DISTRIBUTION | | TOTAL | BIBLIOGRAPHIC & REFERENCE | SPECIALIZED INFO. CENTERS | TRANSLATIONS | TOTAL | SYMPOSA | | AUDIO/ VISUAL MEDIA & OTHER |
| TOTAL, ALL AGENCIES..... | 400,408 | 107,073 | 99,846 | 7,227 | 190,515 | 153,900 | 30,905 | 5,710 | 35,346 | 22,005 | 13,341 | 67,474 |
| DEPARTMENTS | | | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL.. | 10,700 | 3,520 | 3,304 | 216 | 5,046 | 5,043 | - | 3 | 1,864 | 1,774 | 90 | 270 |
| AGRICULTURAL RESEARCH SERVICE..... | 3,379 | 1,827 | 1,622 | 205 | 802 | 799 | - | 3 | 750 | 750 | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 124 | 9 | 5 | - | - | - | - | - | 114 | 114 | - | 1 |
| ECONOMIC RESEARCH SERVICE..... | 387 | 323 | 323 | - | 12 | 12 | - | - | 52 | 52 | - | - |
| FARMER COOPERATIVE SERVICE..... | 48 | 48 | 48 | - | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 2,677 | 1,306 | 1,295 | 11 | 423 | 423 | - | - | 938 | 848 | 90 | 10 |
| NATIONAL AGRICULTURAL LIBRARY..... | 4,078 | - | - | - | 3,809 | 3,809 | - | - | 10 | 10 | - | 259 |
| STATISTICAL REPORTING SERVICE..... | 7 | 7 | 7 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 68,404 | 46,995 | 46,905 | 90 | 19,025 | 14,879 | 3,744 | 402 | 846 | 704 | 142 | 1,538 |
| BUREAU OF THE CENSUS..... | 469 | 225 | 225 | - | 67 | 28 | 39 | - | 39 | 39 | - | 138 |
| NATIONAL BUREAU OF STANDARDS..... | 11,165 | 1,182 | 1,117 | 65 | 8,643 | 5,194 | 3,427 | 22 | 614 | 482 | 132 | 726 |
| NATIONAL OCEANIC AND ATMOSP. ADMIN. | 3,940 | 2,330 | 2,305 | 25 | 1,331 | 833 | 278 | 220 | 193 | 183 | 10 | 86 |
| OFFICE OF BUSINESS ECONOMICS..... | 180 | 180 | 180 | - | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 28 | - | - | - | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | 52,622 | 43,078 | 43,078 | - | 8,984 | 8,824 | - | 160 | - | - | - | 28 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 147,258 | 26,369 | 24,715 | 1,654 | 65,216 | 57,074 | 7,037 | 1,105 | 18,296 | 12,647 | 5,649 | 560 |
| DEPARTMENT OF THE ARMY..... | 69,807 | 12,571 | 11,184 | 1,387 | 44,000 | 41,860 | 1,429 | 711 | 11,851 | 9,034 | 2,817 | 1,385 |
| DEPARTMENT OF THE NAVY..... | 16,247 | 4,792 | 4,701 | 91 | 5,425 | 3,550 | 1,600 | 275 | 3,440 | 3,000 | 440 | 2,590 |
| DEPARTMENT OF THE AIR FORCE..... | 18,513 | 8,011 | 7,902 | 109 | 4,478 | 2,121 | 2,238 | 119 | 2,772 | 601 | 2,171 | 3,252 |
| DEFENSE AGENCIES..... | 42,576 | 995 | 928 | 67 | 11,298 | 9,543 | 1,755 | - | 233 | 12 | 221 | 30,150 |
| DEPARTMENT-WIDE FUNDS..... | 15 | - | - | - | 15 | - | 15 | - | - | - | - | - |
| DEPT HEALTH, ED, & WELFARE, TOTAL. | 72,350 | 6,516 | 4,358 | 2,158 | 45,128 | 31,530 | 12,281 | 1,317 | 5,958 | 2,439 | 3,519 | 14,748 |
| FOOD AND DRUG ADMINISTRATION..... | 5,367 | 357 | 325 | 32 | 4,825 | 674 | 4,140 | 11 | 58 | 5 | 53 | 127 |
| HEALTH SERV & MENTAL HEALTH ADM.... | 8,859 | 2,515 | 2,115 | 400 | 2,928 | 389 | 2,471 | 68 | 1,107 | 374 | 733 | 2,309 |
| NATIONAL INSTITUTES OF HEALTH..... | 40,143 | 7,181 | 1,455 | 1,726 | 24,597 | 20,713 | 2,646 | 1,238 | 2,774 | 1,991 | 783 | 9,591 |
| OFFICE OF EDUCATION..... | 17,649 | 200 | 200 | - | 2,778 | 9,754 | 3,024 | - | 1,950 | - | 1,950 | 2,721 |
| SOCIAL SECURITY ADMINISTRATION..... | 332 | 263 | 263 | - | - | - | - | - | 69 | 69 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL. | 13,551 | 6,488 | 6,484 | 4 | 5,204 | 4,268 | 877 | 59 | 563 | 553 | 10 | 1,296 |
| BUREAU OF MINES..... | 874 | 474 | 474 | - | 260 | 260 | - | - | 100 | 100 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 19 | 12 | 8 | 4 | 7 | - | 7 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 510 | 69 | 69 | - | 410 | 211 | 175 | 24 | 31 | 31 | - | - |
| BUREAU OF SPORT FISH & WILDLIFE..... | 768 | 273 | 273 | - | 360 | 360 | - | - | 135 | 135 | - | - |
| OFFICE OF LIBRARY SERVICES..... | 912 | - | - | - | 908 | 903 | - | 5 | 4 | 4 | - | - |
| GEOLOGICAL SURVEY..... | 9,538 | 5,559 | 5,559 | - | 2,412 | 1,718 | 664 | 30 | 271 | 271 | - | 1,296 |
| OFFICE OF COAL RESEARCH..... | 16 | 16 | 16 | - | - | - | - | - | 2 | 2 | - | - |
| OFFICE OF SALINE WATER..... | 136 | 85 | 85 | - | 31 | - | 31 | - | 20 | 10 | 10 | - |
| OFFICE OF WATER RESOURCES RESEARCH | 816 | - | - | - | 816 | 816 | - | - | - | - | - | - |

| | | | | | | | | | | | | |
|-------------------------------------|---------|--------|--------|-------|--------|--------|--------|-------|--------|--------|-------|--------|
| NATIONAL OCEANIC AND ATMOSP. ADMIN. | 3,940 | 2,330 | 2,305 | 25 | 1,331 | 833 | 278 | 220 | 193 | 183 | 10 | 86 |
| OFFICE OF BUSINESS ECONOMICS..... | 180 | 180 | 180 | - | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 28 | - | - | - | - | - | - | - | - | - | - | 28 |
| PATENT OFFICE..... | 2,622 | 43,078 | 43,078 | - | 8,984 | 8,824 | - | 160 | - | - | - | 560 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 147,258 | 26,369 | 24,715 | 1,654 | 65,216 | 57,074 | 7,037 | 1,105 | 18,296 | 12,647 | 5,649 | 37,377 |
| DEPARTMENT OF THE ARMY..... | 69,807 | 12,571 | 11,184 | 1,387 | 44,000 | 41,860 | 1,429 | 711 | 11,851 | 9,034 | 2,817 | 1,385 |
| DEPARTMENT OF THE NAVY..... | 16,247 | 4,722 | 4,701 | 91 | 5,425 | 3,550 | 1,600 | 275 | 3,440 | 3,000 | 440 | 2,590 |
| DEPARTMENT OF THE AIR FORCE..... | 16,513 | 8,011 | 7,902 | 109 | 4,478 | 2,121 | 2,238 | 119 | 2,772 | 601 | 2,171 | 3,252 |
| DEFENSE AGENCIES..... | 42,676 | 995 | 928 | 67 | 11,298 | 9,543 | 1,755 | - | 233 | 12 | 221 | 30,150 |
| DEPARTMENT-WIDE FUNDS..... | 15 | - | - | - | 15 | - | 15 | - | - | - | - | - |
| DEPT HEALTH, ED, & WELFARE, TOTAL. | 72,350 | 6,516 | 4,358 | 2,158 | 45,128 | 31,530 | 12,281 | 1,317 | 5,958 | 7,439 | 3,519 | 14,748 |
| FOOD AND DRUG ADMINISTRATION..... | 5,367 | 357 | 325 | 32 | 4,825 | 674 | 4,140 | 11 | 58 | 5 | 53 | 127 |
| HEALTH SERV & MENTAL HEALTH ADM. | 8,859 | 2,515 | 2,115 | 400 | 2,928 | 389 | 2,471 | 68 | 1,107 | 374 | 733 | 2,309 |
| NATIONAL INSTITUTES OF HEALTH..... | 40,143 | 3,181 | 1,455 | 1,726 | 24,597 | 20,713 | 2,646 | 1,238 | 2,774 | 1,991 | 783 | 9,591 |
| OFFICE OF EDUCATION..... | 17,649 | 200 | 200 | - | 12,778 | 9,754 | 3,024 | - | 1,950 | - | 1,950 | 2,721 |
| SOCIAL SECURITY ADMINISTRATION..... | 332 | 263 | 263 | - | - | - | - | - | 69 | 69 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL. | 13,551 | 6,488 | 6,484 | 4 | 5,204 | 4,268 | 877 | 59 | 563 | 553 | 10 | 1,296 |
| BUREAU OF MINES..... | 834 | 474 | 474 | - | 260 | 260 | - | - | 100 | 100 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 19 | 12 | 8 | 4 | 7 | - | 7 | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 510 | 69 | 69 | - | 410 | 211 | 175 | 24 | 31 | 31 | - | - |
| BUREAU OF SPORT FISH & WILDLIFE... | 768 | 273 | 273 | - | 360 | 360 | - | - | 135 | 135 | - | - |
| OFFICE OF LIBRARY SERVICES..... | 912 | - | - | - | 908 | 903 | - | 5 | 4 | 4 | - | - |
| GEOLOGICAL SURVEY..... | 9,538 | 5,559 | 5,559 | - | 2,412 | 1,718 | 664 | 30 | 271 | 271 | - | 1,296 |
| OFFICE OF COAL RESEARCH..... | 18 | 16 | 16 | - | - | - | - | - | 2 | 2 | - | - |
| OFFICE OF SALINE WATER..... | 136 | 85 | 85 | - | 31 | - | 31 | - | 20 | 10 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH | 816 | - | - | - | 816 | 816 | - | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 50 | - | - | - | - | - | - | - | 50 | 50 | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN.. | 50 | - | - | - | - | - | - | - | 50 | 50 | - | - |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 92 | 92 | - | 40 | 40 | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 132 | 92 | 92 | - | 40 | 40 | - | - | - | - | - | - |
| POSTAL SERVICE..... | 32 | - | - | - | - | - | - | - | - | - | - | 32 |
| DEPARTMENT OF STATE, TOTAL..... | 2,273 | 572 | - | 572 | 1,663 | 1,663 | - | - | 38 | 38 | - | - |
| DEPARTMENTAL FUNDS..... | 107 | - | - | - | 107 | 107 | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOP.. | 2,166 | 572 | - | 572 | 1,556 | 1,556 | - | - | 38 | 38 | - | - |
| DEPT. OF TRANSPORTATION, TOTAL..... | 3,876 | 236 | 234 | 2 | 3,432 | 688 | 2,744 | - | 58 | 53 | 5 | 150 |
| FEDERAL AVIATION ADMINISTRATION.... | 486 | 47 | 47 | - | 411 | 411 | - | - | 28 | 23 | 5 | - |
| FEDERAL HIGHWAY ADMINISTRATION.... | 1,435 | 155 | 155 | - | 1,250 | 175 | 1,075 | - | 30 | 30 | - | - |
| NAT'L HIGHWAY TRAFFIC SAFETY ADMIN | 341 | 30 | 30 | - | 311 | 102 | 209 | - | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 1,198 | 4 | 2 | 2 | 1,044 | - | 1,044 | - | - | - | - | 150 |
| UNITED STATES COAST GUARD..... | 416 | - | - | - | 416 | - | 416 | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | | | |
| ADVIS COMM ON INTERGOVT RELATIONS. | 62 | 33 | 33 | - | 25 | 25 | - | - | 4 | 4 | - | - |
| ATOMIC ENERGY COMMISSION..... | 4,933 | 2,563 | 2,563 | - | 2,306 | 2,306 | - | - | 64 | 64 | - | - |
| ENVIRONMENTAL PROTECTION AGENCY... | 3,147 | 994 | 978 | 16 | 1,430 | 22 | 1,013 | 395 | 354 | 221 | 133 | 369 |
| FEDERAL COMMUNICATIONS COMMISSION. | 16 | 5 | 5 | - | 5 | 5 | - | - | 6 | 6 | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 32 | - | - | - | 32 | 32 | - | - | - | - | - | - |
| LIBRARY OF CONGRESS..... | 22,992 | - | - | - | 20,464 | 20,464 | - | - | 13 | 13 | - | 2,515 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 26,894 | 9,941 | 8,424 | 1,517 | 11,507 | 8,157 | 3,174 | 176 | 4,237 | 1,846 | 2,393 | 1,207 |
| NATIONAL SCIENCE FOUNDATION..... | 15,037 | 745 | - | 745 | 6,033 | 3,815 | - | 2,218 | 697 | 697 | - | 7,562 |
| OFFICE OF EMERGENCY PREPAREDNESS.. | 8 | - | - | - | 3 | 3 | - | - | 5 | 5 | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY.. | 140 | 40 | 25 | 15 | 70 | 45 | 15 | 10 | 10 | 5 | 5 | 20 |
| SMITHSONIAN INSTITUTION..... | 2,064 | 1,175 | 1,155 | 20 | 669 | 644 | - | 25 | 130 | 130 | - | 90 |
| TENNESSEE VALLEY AUTHORITY..... | 116 | - | - | - | 116 | 116 | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGCY | 241 | 174 | 6 | 168 | 51 | 31 | 20 | - | 1 | 1 | - | 15 |
| VETERANS ADMINISTRATION..... | 6,100 | 615 | 565 | 50 | 3,050 | 3,050 | - | - | 2,150 | 755 | 1,395 | 285 |

TABLE D-6. FEDERAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY,
FISCAL YEAR 1972 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | PUBLICATION AND DISTRIBUTION | | SUPPORT OF PUBLICATIONS | DOCUMENTATION, REFERENCE, AND INFORMATION SERVICES | | | SYMPOSIA AND AUDIO/VISUAL MEDIA | | | R&D IN INFO. SCIENCE | |
|-------------------------------------|---------|------------------------------|----------------------------|-------------------------|--|---------------------------|---------------------------|---------------------------------|--------|-----------|----------------------|----------------------------|
| | | TOTAL | PUBLICATION & DISTRIBUTION | | TOTAL | BIBLIOGRAPHIC & REFERENCE | SPECIALIZED INFO. CENTERS | TRANSLATIONS | TOTAL | SYM-POSIA | | AUDIO/VISUAL MEDIA & OTHER |
| TOTAL, ALL AGENCIES..... | 413,049 | 110,702 | 103,850 | 6,852 | 191,238 | 155,981 | 30,295 | 4,962 | 36,674 | 22,708 | 13,966 | 74,435 |
| DEPARTMENTS | 10,547 | 3,537 | 3,322 | 215 | 4,863 | 4,860 | - | 3 | 1,872 | 1,781 | 91 | 275 |
| DEPARTMENT OF AGRICULTURE, TOTAL... | 3,379 | 1,827 | 1,622 | 205 | 802 | 799 | - | 3 | 750 | 750 | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 124 | 9 | 9 | - | - | - | - | - | 114 | 114 | - | 1 |
| COOPERATIVE STATE RESEARCH SERVICE | 392 | 327 | 327 | - | 13 | 13 | - | - | 52 | 52 | - | - |
| ECONOMIC RESEARCH SERVICE..... | 50 | 50 | 50 | - | - | - | - | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 2,699 | 1,316 | 1,306 | 10 | 426 | 426 | - | - | 946 | 855 | 91 | 11 |
| FOREST SERVICE..... | 3,895 | - | - | - | 3,622 | 3,622 | - | - | 10 | 10 | - | 263 |
| NATIONAL AGRICULTURAL LIBRARY..... | 8 | 8 | 8 | - | - | - | - | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 71,850 | 49,245 | 49,150 | 95 | 20,017 | 15,574 | 3,984 | 459 | 873 | 733 | 140 | 1,715 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 469 | 225 | 225 | - | 67 | 28 | 39 | - | 39 | 39 | - | 138 |
| BUREAU OF THE CENSUS..... | 12,023 | 1,264 | 1,197 | 67 | 9,351 | 5,720 | 3,609 | 22 | 705 | 570 | 135 | 703 |
| NATIONAL BUREAU OF STANDARDS..... | 4,282 | 2,437 | 2,409 | 28 | 1,579 | 971 | 336 | 272 | 129 | 124 | 5 | 137 |
| NATIONAL OCEANIC AND ATMOS. ADMIN. | 190 | 190 | 190 | - | - | - | - | - | - | - | - | - |
| OFFICE OF BUSINESS ECONOMICS..... | 162 | - | - | - | - | - | - | - | - | - | - | 162 |
| OFFICE OF TELECOMMUNICATIONS..... | 54,724 | 45,129 | 45,129 | - | 9,020 | 8,855 | - | 165 | - | - | - | 575 |
| PATENT OFFICE..... | 149,954 | 26,796 | 25,111 | 1,685 | 63,575 | 57,427 | 5,024 | 1,124 | 18,582 | 12,843 | 5,739 | 41,001 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 69,755 | 12,614 | 11,217 | 1,397 | 43,871 | 41,648 | 1,508 | 715 | 11,877 | 9,013 | 2,864 | 1,393 |
| DEPARTMENT OF THE ARMY..... | 16,850 | 5,070 | 4,970 | 100 | 5,380 | 3,780 | 1,310 | 290 | 3,640 | 3,180 | 460 | 2,760 |
| DEPARTMENT OF THE NAVY..... | 17,220 | 8,112 | 7,996 | 116 | 2,740 | 2,190 | 431 | 119 | 2,869 | 638 | 2,231 | 3,499 |
| DEPARTMENT OF THE AIR FORCE..... | 46,114 | 1,000 | 928 | 72 | 11,569 | 9,809 | 1,760 | - | 196 | 12 | 184 | 33,349 |
| DEFENSE AGENCIES..... | 15 | - | - | - | 15 | - | 15 | - | - | - | - | - |
| DEPARTMENT-WIDE FUNDS..... | 67,866 | 6,780 | 4,852 | 1,928 | 38,362 | 24,754 | 12,412 | 1,196 | 6,467 | 2,561 | 3,906 | 16,257 |
| DEPT HEALTH, ED, & WELFARE, TOTAL. | 5,636 | 375 | 341 | 34 | 5,067 | 708 | 4,347 | 12 | 61 | 6 | 55 | 133 |
| FOOD AND DRUG ADMINISTRATION..... | 9,955 | 2,458 | 2,458 | - | 3,172 | 385 | 2,668 | 119 | 1,414 | 414 | 1,000 | 2,911 |
| HEALTH SERV & MENTAL HEALTH ADM... | 40,179 | 3,465 | 1,571 | 1,894 | 24,183 | 20,848 | 2,270 | 1,065 | 2,868 | 2,067 | 801 | 9,663 |
| NATIONAL INSTITUTES OF HEALTH..... | 11,730 | 190 | 190 | - | 5,940 | 2,813 | 3,127 | - | 2,050 | - | 2,050 | 3,550 |
| OFFICE OF EDUCATION..... | 366 | 292 | 292 | - | - | - | - | - | 74 | 74 | - | - |
| SOCIAL SECURITY ADMINISTRATION..... | 13,987 | 6,679 | 6,675 | 4 | 5,369 | 4,416 | 876 | 77 | 613 | 602 | 11 | 1,326 |
| DEPARTMENT OF THE INTERIOR, TOTAL. | 841 | 472 | 472 | - | 269 | 269 | - | - | 100 | 100 | - | - |
| BUREAU OF MINES..... | 21 | 12 | 8 | 4 | 7 | - | 7 | - | 2 | 1 | 1 | - |
| BUREAU OF OUTDOOR RECREATION..... | 504 | 72 | 72 | - | 400 | 201 | 175 | - | 31 | 31 | - | - |
| BUREAU OF RECLAMATION..... | | | | | | | | | | | | |

| NATIONAL AGRICULTURAL LIBRARY..... | | | | | | | | | | | |
|---|---------|--------|--------|-------|--------|--------|--------|-------|--------|-------|--------|
| STATISTICAL REPORTING SERVICE..... | | | | | | | | | | | |
| DEPARTMENT OF COMMERCE, TOTAL..... | | | | | | | | | | | |
| BUREAU OF THE CENSUS..... | 469 | 225 | 225 | 67 | 28 | 39 | 39 | 39 | 733 | 140 | 1,715 |
| NATIONAL BUREAU OF STANDARDS..... | 12,023 | 1,264 | 1,197 | 67 | 9,351 | 5,720 | 22 | 705 | 570 | 135 | 138 |
| NATIONAL OCEANIC AND ATMOSP. ADMIN..... | 4,082 | 2,437 | 2,409 | 28 | 1,579 | 971 | 272 | 159 | 124 | 5 | 703 |
| OFFICE OF BUSINESS ECONOMICS..... | 190 | 190 | 190 | - | - | - | - | - | - | - | 137 |
| OFFICE OF TELECOMMUNICATIONS..... | 162 | 162 | 162 | - | - | - | - | - | - | - | - |
| PATENT OFFICE..... | 54,724 | 45,129 | 45,129 | - | 9,020 | 8,855 | 165 | - | - | - | 162 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 149,954 | 26,796 | 25,111 | 1,685 | 63,575 | 57,427 | 5,024 | 1,124 | 18,582 | 5,739 | 575 |
| DEPARTMENT OF THE ARMY..... | 69,755 | 12,614 | 11,217 | 1,397 | 43,871 | 41,648 | 1,508 | 715 | 11,877 | 2,864 | 41,001 |
| DEPARTMENT OF THE NAVY..... | 16,850 | 5,070 | 4,970 | 100 | 5,380 | 3,780 | 1,310 | 290 | 3,640 | 460 | 1,393 |
| DEPARTMENT OF THE AIR FORCE..... | 17,220 | 8,112 | 7,996 | 116 | 2,740 | 2,190 | 431 | 119 | 2,869 | 2,231 | 2,760 |
| DEFENSE AGENCIES..... | 46,114 | 1,000 | 928 | 72 | 11,569 | 9,809 | 1,760 | - | 196 | 184 | 3,499 |
| DEPARTMENT-WIDE FUNDS..... | 15 | - | - | - | 15 | - | 15 | - | - | - | 33,349 |
| DEPT HEALTH, ED, & WELFARE, TOTAL..... | 67,866 | 6,780 | 4,852 | 1,928 | 38,362 | 24,754 | 12,412 | 1,196 | 6,467 | 2,561 | 16,257 |
| FOOD AND DRUG ADMINISTRATION..... | 5,636 | 375 | 341 | 34 | 5,067 | 708 | 4,347 | 12 | 61 | 55 | 133 |
| HEALTH SERV & MENTAL HEALTH ADM..... | 9,955 | 2,458 | 2,458 | - | 3,172 | 385 | 2,668 | 119 | 1,414 | 1,000 | 2,911 |
| NATIONAL INSTITUTES OF HEALTH..... | 40,179 | 3,465 | 1,571 | 1,894 | 24,183 | 20,848 | 2,270 | 1,065 | 2,868 | 801 | 9,663 |
| OFFICE OF EDUCATION..... | 11,730 | 190 | 190 | - | 5,940 | 2,813 | 3,127 | - | 2,050 | 2,050 | 3,550 |
| SOCIAL SECURITY ADMINISTRATION..... | 366 | 292 | 292 | - | - | - | - | - | 74 | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 13,987 | 6,679 | 6,675 | 4 | 5,369 | 4,416 | 876 | 77 | 613 | 11 | 1,326 |
| BUREAU OF MINES..... | 841 | 472 | 472 | - | 269 | 265 | - | - | 100 | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 21 | 12 | 8 | 4 | 7 | - | 7 | - | 2 | 1 | - |
| BUREAU OF RECLAMATION..... | 503 | 72 | 72 | - | 400 | 201 | 175 | 24 | 31 | - | - |
| BUREAU OF SPORT FISH & WILDLIFE..... | 813 | 284 | 284 | - | 366 | 357 | - | 9 | 163 | - | - |
| OFFICE OF LIBRARY SERVICES..... | 912 | - | - | - | 908 | 903 | - | 5 | 4 | - | - |
| GEOLOGICAL SURVEY..... | 9,823 | 5,731 | 5,731 | - | 2,477 | 1,774 | 664 | 39 | 289 | - | 1,326 |
| OFFICE OF COAL RESEARCH..... | 22 | 18 | 18 | - | - | - | - | - | 4 | - | - |
| OFFICE OF SALINE WATER..... | 140 | 90 | 90 | - | 30 | - | 30 | - | 20 | 10 | - |
| OFFICE OF WATER RESOURCES RESEARCH | 912 | - | - | - | 912 | 912 | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 50 | - | - | - | - | - | - | - | 50 | - | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 50 | - | - | - | - | - | - | - | 50 | - | - |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 92 | 92 | - | 40 | 40 | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 132 | 92 | 92 | - | 40 | 40 | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 2,319 | 578 | - | 578 | 1,663 | 1,663 | - | - | 78 | - | - |
| DEPARTMENTAL FUNDS..... | 107 | - | - | - | 107 | 107 | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOP..... | 2,212 | 578 | - | 578 | 1,556 | 1,556 | - | - | 78 | - | - |
| DEPT. OF TRANSPORTATION, TOTAL..... | 4,460 | 240 | 240 | - | 4,132 | 763 | 3,369 | - | 58 | 53 | 30 |
| FEDERAL AVIATION ADMINISTRATION..... | 546 | 47 | 47 | - | 471 | 471 | - | - | 28 | 23 | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,460 | 165 | 165 | - | 1,265 | 190 | 1,075 | - | 30 | 5 | - |
| NAT'L HIGHWAY TRAFFIC SAFETY ADMIN | 493 | 28 | 28 | - | 465 | 102 | 363 | - | - | - | - |
| OFFICE OF THE SECRETARY..... | 1,545 | - | - | - | 1,515 | - | 1,515 | - | - | - | 30 |
| UNITED STATES COAST GUARD..... | 416 | - | - | - | 416 | - | 416 | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | | |
| ADVIS COMM ON INTERGOVT RELATIONS..... | 55 | 30 | 30 | - | 20 | 20 | - | - | 5 | - | - |
| ATOMIC ENERGY COMMISSION..... | 4,970 | 2,536 | 2,536 | - | 2,338 | 2,338 | - | - | 96 | - | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 3,087 | 1,158 | 1,142 | 16 | 1,082 | 25 | 1,015 | 42 | 456 | 136 | 391 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 17 | 5 | 5 | - | 5 | 5 | - | - | 7 | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 33 | - | - | - | 33 | 33 | - | - | - | - | - |
| LIBRARY OF CONGRESS..... | 32,444 | - | - | - | 28,515 | 28,515 | - | - | 13 | - | 3,916 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 27,877 | 10,262 | 8,699 | 1,563 | 11,944 | 8,197 | 3,570 | 177 | 4,389 | 1,876 | 1,282 |
| SCIENCE FOUNDATION..... | 12,582 | 503 | - | 503 | 3,664 | 1,840 | - | 1,824 | 678 | - | 7,737 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 3 | - | - | - | 3 | 3 | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 150 | 40 | 25 | 15 | 70 | 45 | 15 | 10 | 10 | 5 | 30 |
| SMITHSONIAN INSTITUTION..... | 5 | 5 | 5 | - | - | - | - | - | - | - | - |
| RESERVE VALLEY AUTHORITY..... | 4,064 | 1,441 | 1,394 | 25 | 2,255 | 2,205 | - | 50 | 240 | - | 150 |
| US ARMS CONTROL & DISARMAMENT AGCY | 123 | - | - | - | 123 | 123 | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 274 | 182 | 7 | 175 | 65 | 35 | 30 | - | 2 | - | 25 |
| TOTAL..... | 6,200 | 615 | 565 | 50 | 3,100 | 3,100 | - | - | 2,185 | 765 | 300 |

TABLE D-7. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRAMURAL | | | | | EXTRAMURAL | | | | |
|-------------------------------------|---------|------------|----------------------------------|---------------------------------|-------------------------------|----------------------------|------------|----------------------------------|---------------------------------|-------------------------------|----------------------------|
| | | TOTAL | PUBLICA- TION AND DISTRIB. | DOC, REF, & INFO. SERVICE | SYMPOSA & AUDIO/ VISUAL | R&D IN INFO. SCIENCE | TOTAL | PUBLICA- TION AND DISTRIB. | DOC, REF, & INFO. SERVICE | SYMPOSA & AUDIO/ VISUAL | R&D IN INFO. SCIENCE |
| TOTAL, ALL AGENCIES..... | 386,783 | 262,978 | 78,240 | 144,622 | 23,463 | 16,653 | 123,805 | 20,697 | 48,519 | 9,113 | 45,476 |
| DEPARTMENTS | 9,753 | 9,576 | 3,485 | 4,180 | 1,793 | 118 | 177 | 14 | 62 | - | 101 |
| DEPARTMENT OF AGRICULTURE, TOTAL.. | 3,182 | 3,182 | 1,703 | 732 | 747 | - | - | - | - | - | - |
| AGRICULTURAL RESEARCH SERVICE..... | 128 | 128 | 9 | - | 118 | 1 | - | - | - | - | - |
| COOPERATIVE STATE RESEARCH SERVICE | 313 | 313 | 268 | 2 | 43 | - | - | - | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 69 | 69 | 69 | - | - | - | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 2,498 | 2,498 | 1,217 | 395 | 876 | 10 | - | - | - | - | - |
| FOREST SERVICE..... | 3,557 | 3,380 | 213 | 3,051 | 9 | 107 | 177 | 14 | 62 | - | 101 |
| NATIONAL AGRICULTURAL LIBRARY..... | 6 | 6 | 6 | - | - | - | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | 60,300 | 59,670 | 40,293 | 17,532 | 591 | 1,254 | 630 | 9 | 588 | 18 | 15 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 379 | 367 | 158 | 54 | 27 | 128 | 12 | - | - | 12 | - |
| BUREAU OF THE CENSUS..... | 10,522 | 9,932 | 1,116 | 7,703 | 425 | 688 | 590 | 9 | 563 | 6 | 12 |
| NATIONAL BUREAU OF STANDARDS..... | 2,804 | 2,779 | 1,603 | 993 | 139 | 44 | 25 | - | 25 | - | - |
| NATIONAL OCEANIC AND ATMOS. ADMIN. | 150 | 150 | 150 | - | - | - | - | - | - | - | - |
| OFFICE OF BUSINESS ECONOMICS..... | 46,445 | 46,442 | 37,266 | 8,782 | - | 394 | 3 | - | - | - | 3 |
| PATENT OFFICE..... | 145,204 | 86,155 | 15,767 | 51,825 | 13,564 | 4,999 | 59,049 | 10,815 | 15,634 | 4,475 | 28,125 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 68,770 | 55,240 | 9,775 | 34,906 | 9,471 | 1,088 | 13,530 | 2,431 | 8,484 | 2,345 | 70 |
| DEPARTMENT OF THE ARMY..... | 15,905 | 7,779 | 2,036 | 3,147 | 1,421 | 1,175 | 8,126 | 2,512 | 2,494 | 1,863 | 1,257 |
| DEPARTMENT OF THE NAVY..... | 21,071 | 9,064 | 3,273 | 2,187 | 2,432 | 1,172 | 12,007 | 5,614 | 3,144 | 267 | 2,982 |
| DEPARTMENT OF THE AIR FORCE..... | 39,443 | 14,072 | 683 | 11,585 | 240 | 1,564 | 25,371 | 258 | 1,497 | - | 23,616 |
| DEFENSE AGENCIES..... | 15 | - | - | - | - | - | 15 | - | 15 | - | - |
| DEPARTMENT-WIDE FUNDS..... | 66,042 | 34,616 | 3,647 | 23,493 | 2,094 | 5,382 | 31,426 | 1,792 | 17,646 | 2,256 | 9,732 |
| DEPT HEALTH, ED, & WELFARE, TOTAL.. | 5,350 | 2,315 | 250 | 1,985 | 60 | 20 | 3,035 | 100 | 2,830 | - | 105 |
| FOOD AND DRUG ADMINISTRATION..... | 8,233 | 3,236 | 1,233 | 1,745 | 246 | 12 | 4,997 | 529 | 931 | 940 | 2,597 |
| HEALTH SERV & MENTAL HEALTH ADM.. | 36,892 | 22,019 | 1,839 | 13,124 | 1,706 | 5,350 | 14,873 | 1,163 | 7,893 | 1,021 | 4,796 |
| NATIONAL INSTITUTES OF HEALTH..... | 15,222 | 6,701 | 48 | 6,639 | 14 | - | 8,521 | - | 5,992 | 295 | 2,234 |
| OFFICE OF EDUCATION..... | 345 | 345 | 277 | - | 68 | - | - | - | - | - | - |
| SOCIAL SECURITY ADMINISTRATION..... | 12,696 | 12,387 | 6,152 | 4,421 | 538 | 1,270 | 309 | 41 | 252 | 6 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL.. | 821 | 821 | 483 | 241 | 97 | - | - | - | - | - | - |
| BUREAU OF MINES..... | 16 | 16 | 9 | 7 | - | - | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 519 | 509 | 56 | 410 | 28 | 15 | 10 | - | 10 | - | - |
| BUREAU OF RECLAMATION..... | 798 | 671 | 338 | 183 | 150 | - | 127 | - | 127 | - | - |
| BUREAU OF SPORT FISH & WILDLIFE... | 950 | 950 | - | 947 | 3 | - | - | - | - | - | - |
| OFFICE OF LIBRARY SERVICES..... | 8,864 | 8,864 | 5,203 | 2,158 | 248 | 1,255 | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 15 | - | - | - | - | - | 15 | 15 | - | - | - |
| OFFICE OF COAL RESEARCH..... | 197 | 165 | 63 | 90 | 12 | - | 32 | 26 | - | 6 | - |
| OFFICE OF SALINE WATER..... | 516 | 391 | - | 391 | - | - | 125 | - | 125 | - | - |
| OFFICE OF WATER RESOURCES RESEARCH | 33 | - | - | - | - | - | 33 | - | - | 33 | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 33 | - | - | - | - | - | 33 | - | - | 33 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN.. | 132 | 132 | 92 | 40 | - | - | - | - | - | - | - |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 132 | 92 | 40 | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 94 | 2 | - | - | - | - | 94 | - | - | - | 94 |
| POSTAL SERVICE..... | | | | | | | | | | | |

| | | | | | | | | | | | |
|--|--------|--------|-------|--------|-------|-------|--------|-------|--------|-------|--------|
| DEPARTMENT OF THE ARMY..... | 68,770 | 55,240 | 9,775 | 34,906 | 9,471 | 1,088 | 13,530 | 2,431 | 3,444 | 2,343 | 2,000 |
| DEPARTMENT OF THE NAVY..... | 15,905 | 7,779 | 2,036 | 3,147 | 1,421 | 1,175 | 8,126 | 2,512 | 2,494 | 1,863 | 1,257 |
| DEPARTMENT OF THE AIR FORCE..... | 21,071 | 9,064 | 3,273 | 2,187 | 2,432 | 1,172 | 12,007 | 5,614 | 3,144 | 267 | 2,982 |
| DEFENSE AGENCIES..... | 39,443 | 14,072 | 683 | 11,585 | 240 | 1,564 | 25,371 | 258 | 1,497 | - | 23,616 |
| DEPARTMENT-WIDE FUNDS..... | 15 | - | - | - | - | - | 15 | - | 15 | - | - |
| DEPT HEALTH, ED, & WELFARE, TOTAL..... | 66,042 | 34,616 | 3,647 | 23,493 | 2,094 | 5,382 | 31,426 | 1,792 | 17,646 | 2,256 | 9,732 |
| FOOD AND DRUG ADMINISTRATION..... | 5,350 | 2,315 | 250 | 1,985 | 60 | 20 | 3,035 | 100 | 2,830 | - | 105 |
| HEALTH SERV & MENTAL HEALTH ADM..... | 8,233 | 3,236 | 1,233 | 1,745 | 246 | 12 | 4,997 | 529 | 931 | 940 | 2,597 |
| NATIONAL INSTITUTES OF HEALTH..... | 36,892 | 22,019 | 1,839 | 13,124 | 1,706 | 5,350 | 14,873 | 1,163 | 7,893 | 1,021 | 4,796 |
| OFFICE OF EDUCATION..... | 15,222 | 6,701 | 48 | 6,639 | 14 | - | 8,521 | - | 5,992 | 295 | 2,234 |
| SOCIAL SECURITY ADMINISTRATION..... | 345 | 345 | 277 | - | 68 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 12,696 | 12,387 | 6,152 | 4,627 | 538 | 1,270 | 309 | 41 | 262 | 6 | - |
| BUREAU OF MINES..... | 821 | 821 | 483 | 241 | 97 | - | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 16 | 16 | 9 | 7 | - | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 519 | 509 | 56 | 410 | 28 | 15 | 10 | - | 10 | - | - |
| BUREAU OF SPORT FISH & WILDLIFE..... | 798 | 671 | 338 | 183 | 150 | - | 127 | - | 127 | - | - |
| OFFICE OF LIBRARY SERVICES..... | 950 | 950 | - | 947 | 3 | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 8,864 | 8,864 | 5,203 | 2,158 | 248 | 1,255 | - | 15 | - | - | - |
| OFFICE OF COAL RESEARCH..... | 15 | - | - | - | 12 | - | 15 | 26 | - | 6 | - |
| OFFICE OF SALINE WATER..... | 197 | 165 | 63 | 90 | - | - | 32 | - | - | - | - |
| OFFICE OF WATER RESOURCES RESEARCH | 516 | 391 | - | 391 | - | - | 125 | - | 125 | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 33 | - | - | - | - | - | 33 | - | - | 33 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 33 | - | - | - | - | - | 33 | - | - | 33 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 132 | 92 | 40 | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 132 | 132 | 92 | 40 | - | - | - | - | - | - | - |
| POSTAL SERVICE..... | 96 | 2 | - | - | - | 2 | 94 | - | - | - | 94 |
| DEPARTMENT OF STATE, TOTAL..... | 10,247 | 9,664 | - | 9,664 | - | - | 583 | 578 | - | 5 | - |
| DEPARTMENTAL FUNDS..... | 81 | 81 | - | 81 | - | - | - | 578 | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOP..... | 10,166 | 9,583 | - | 9,583 | - | - | 583 | - | - | - | - |
| DEPT. OF TRANSPORTATION, TOTAL..... | 3,295 | 2,044 | 101 | 1,885 | 58 | - | 1,251 | 137 | 1,114 | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | 433 | 412 | 26 | 358 | 28 | - | 21 | 21 | - | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,388 | 330 | 75 | 225 | 30 | - | 1,058 | 80 | 978 | - | - |
| NAT'L HIGHWAY TRAFFIC SAFETY ADMIN | 529 | 362 | - | 362 | - | - | 167 | 31 | 136 | - | - |
| OFFICE OF THE SECRETARY..... | 545 | 540 | - | 540 | - | - | 5 | - | - | - | - |
| UNITED STATES COAST GUARD..... | 400 | 400 | - | 400 | - | - | - | - | - | - | - |
| OTHER AGENCIES | | | | | | | | | | | |
| ADVISE COMM ON INTERGOVT RELATIONS.. | 62 | 62 | 44 | 17 | 1 | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION..... | 4,589 | 2,917 | 1,655 | 1,262 | 215 | 119 | 1,672 | 684 | 963 | 25 | 152 |
| ENVIRONMENTAL PROTECTION AGENCY... | 2,411 | 1,629 | 818 | 477 | - | - | 782 | 106 | 448 | 76 | - |
| FEDERAL COMMUNICATIONS COMMISSION.. | 16 | 16 | 5 | 5 | 6 | - | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 31 | 31 | - | 31 | - | - | - | - | - | - | - |
| LIBRARY OF CONGRESS..... | 22,083 | 22,040 | - | 20,139 | 12 | 1,889 | 43 | - | - | - | 43 |
| NATIONAL AERONAUTICS & SPACE ADMIN | 26,547 | 12,676 | 4,191 | 5,335 | 2,258 | 892 | 13,871 | 6,028 | 6,057 | 1,648 | 138 |
| NATIONAL SCIENCE FOUNDATION..... | 14,857 | 1,042 | 68 | 484 | 132 | 358 | 13,815 | 478 | 5,745 | 516 | 7,076 |
| OFFICE OF EMERGENCY PREPAREDNESS... | 8 | 3 | 3 | 3 | - | - | 5 | - | - | 5 | - |
| OFFICE OF SCIENCE AND TECHNOLOGY.. | 120 | 120 | 30 | 60 | 10 | 20 | - | - | - | - | - |
| SMALL BUSINESS ADMINISTRATION..... | 3 | 3 | 3 | - | - | 80 | - | - | - | 25 | - |
| SMITHSONIAN INSTITUTION..... | 1,934 | 1,909 | 1,133 | 606 | 90 | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 110 | 110 | - | 110 | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGCY | 214 | 214 | 166 | 47 | 1 | - | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 6,000 | 5,960 | 590 | 3,000 | 2,100 | 270 | 40 | 15 | - | 25 | - |

TABLE D-8. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION,
BY AGENCY AND ACTIVITY, FISCAL YEAR 1971 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRAMURAL | | | | | EXTRAMURAL | | | | |
|---|---------|------------|----------------------------------|---------------------------------|--------------------------------|----------------------------|------------|----------------------------------|---------------------------------|--------------------------------|----------------------------|
| | | TOTAL | PUBLICA- TION AND DISTRIB. | DOC, REF, & INFO. SERVICE | SYMPOSIA & AUDIO/ VISUAL | RED IN INFO. SCIENCE | TOTAL | PUBLICA- TION AND DISTRIB. | DOC, REF, & INFO. SERVICE | SYMPOSIA & AUDIO/ VISUAL | RED IN INFO. SCIENCE |
| TOTAL, ALL AGENCIES..... | 400,408 | 268,142 | 86,445 | 140,217 | 24,009 | 17,511 | 132,266 | 20,668 | 50,298 | 11,337 | 49,963 |
| DEPARTMENTS | | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL... | 10,700 | 10,340 | 3,520 | 4,843 | 1,864 | 113 | 360 | - | 203 | - | 157 |
| AGRICULTURAL RESEARCH SERVICE..... | 3,379 | 3,379 | 1,827 | 802 | 750 | - | - | - | - | - | - |
| COOPERATIVE STATE RESEARCH SERVICE..... | 124 | 124 | 9 | - | 114 | 1 | - | - | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 387 | 387 | 323 | 12 | 52 | - | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 48 | 48 | 48 | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 2,677 | 2,677 | 1,306 | 423 | 938 | 10 | - | - | - | - | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 4,078 | 3,718 | 7 | 3,606 | 10 | 102 | 360 | - | 203 | - | 157 |
| STATISTICAL REPORTING SERVICE..... | 7 | 7 | - | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 68,404 | 67,288 | 46,615 | 18,407 | 773 | 1,493 | 1,116 | 380 | 618 | 73 | 45 |
| BUREAU OF THE CENSUS..... | 469 | 457 | 225 | 67 | 27 | 138 | 12 | - | - | 12 | - |
| NATIONAL BUREAU OF STANDARDS..... | 11,165 | 10,558 | 1,177 | 8,057 | 608 | 716 | 607 | 5 | 586 | 6 | 10 |
| NATIONAL OCEANIC AND ATMOS. ADMIN. | 3,940 | 3,443 | 1,955 | 1,299 | 138 | 51 | 497 | 375 | 32 | 55 | 35 |
| OFFICE OF BUSINESS ECONOMICS..... | 180 | 180 | 180 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 28 | 28 | - | - | - | 28 | - | - | - | - | - |
| PATENT OFFICE..... | 52,622 | 52,622 | 43,078 | 8,984 | - | 560 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 147,258 | 85,078 | 16,284 | 50,285 | 13,718 | 4,791 | 62,180 | 10,085 | 14,931 | 4,578 | 32,586 |
| DEPARTMENT OF THE ARMY..... | 69,807 | 55,989 | 10,067 | 35,304 | 9,509 | 1,109 | 13,818 | 2,504 | 8,696 | 2,342 | 276 |
| DEPARTMENT OF THE NAVY..... | 16,247 | 8,010 | 2,160 | 3,100 | 1,480 | 1,270 | 8,237 | 2,632 | 2,325 | 1,960 | 1,320 |
| DEPARTMENT OF THE AIR FORCE..... | 18,513 | 8,868 | 3,340 | 2,023 | 2,543 | 962 | 9,645 | 4,671 | 2,455 | 229 | 2,290 |
| DEFENSE AGENCIES..... | 42,676 | 12,211 | 717 | 9,858 | 186 | 1,450 | 30,465 | 278 | 1,440 | 47 | 28,700 |
| DEPARTMENT-WIDE FUNDS..... | 15 | - | - | - | - | - | 15 | - | 15 | - | - |
| DEPT HEALTH, ED, & WELFARE, TOTAL... | 72,350 | 37,473 | 4,295 | 25,794 | 2,162 | 5,222 | 34,877 | 2,221 | 19,334 | 3,796 | 9,526 |
| FOOD AND DRUG ADMINISTRATION..... | 5,367 | 2,332 | 257 | 1,995 | 58 | 22 | 3,035 | 100 | 2,830 | - | 105 |
| HEALTH SERV & MENTAL HEALTH ADM. | 8,859 | 3,538 | 1,631 | 1,668 | 224 | 15 | 5,321 | 884 | 1,260 | 883 | 2,294 |
| NATIONAL INSTITUTES OF HEALTH..... | 40,143 | 23,493 | 1,944 | 14,553 | 1,811 | 5,185 | 16,650 | 1,237 | 10,044 | 963 | 4,406 |
| OFFICE OF EDUCATION..... | 17,649 | 7,778 | 200 | 7,578 | - | - | 9,871 | - | 5,200 | 1,950 | 2,721 |
| SOCIAL SECURITY ADMINISTRATION..... | 332 | 332 | 263 | - | 69 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL... | 13,551 | 13,063 | 6,447 | 4,760 | 551 | 1,304 | 1,000 | - | - | - | - |

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Full Text Provided by ERIC

TABLE D-9. FEDERAL INTRAMURAL AND EXTRAMURAL OBLIGATIONS FOR SCIENTIFIC AND TECHNICAL INFORMATION, BY AGENCY AND ACTIVITY, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | TOTAL | INTRAMURAL | | | | | EXTRAMURAL | | | | |
|-------------------------------------|---------|------------|----------------------------------|---------------------------------|--------------------------------|----------------------------|------------|----------------------------------|---------------------------------|--------------------------------|----------------------------|
| | | TOTAL | PUBLICA- TION AND DISTRIB. | DOC, REF, & INFO. SERVICE | SYMPOSIA & AUDIO/ VISUAL | RCD IN INFO. SCIENCE | TOTAL | PUBLICA- TION AND DISTRIB. | DOC, REF, & INFO. SERVICE | SYMPOSIA & AUDIO/ VISUAL | RCD IN INFO. SCIENCE |
| TOTAL, ALL AGENCIES..... | 413,049 | 277,859 | 89,853 | 143,971 | 24,372 | 19,663 | 135,190 | 20,849 | 47,267 | 12,302 | 54,772 |
| DEPARTMENTS | | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL.. | 10,547 | 10,184 | 3,537 | 4,650 | 1,872 | 125 | 363 | - | 213 | - | 150 |
| AGRICULTURAL RESEARCH SERVICE..... | 3,379 | 3,379 | 1,827 | 802 | 750 | - | - | - | - | - | - |
| COOPERATIVE STATE RESEARCH SERVICE | 124 | 124 | 9 | - | 114 | 1 | - | - | - | - | - |
| ECONOMIC RESEARCH SERVICE..... | 392 | 392 | 327 | 13 | 52 | - | - | - | - | - | - |
| FARMER COOPERATIVE SERVICE..... | 50 | 50 | 50 | - | - | - | - | - | - | - | - |
| FOREST SERVICE..... | 2,699 | 2,699 | 1,316 | 426 | 946 | 11 | - | - | - | - | - |
| NATIONAL AGRICULTURAL LIBRARY..... | 3,895 | 3,532 | - | 3,409 | 10 | 113 | 363 | - | 213 | - | 150 |
| STATISTICAL REPORTING SERVICE..... | 8 | 8 | 8 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 71,850 | 70,756 | 48,885 | 19,391 | 855 | 1,625 | 1,094 | 360 | 626 | 18 | 99 |
| BUREAU OF THE CENSUS..... | 469 | 457 | 225 | 67 | 27 | 138 | 12 | - | - | 12 | - |
| NATIONAL BUREAU OF STANDARDS..... | 12,023 | 11,407 | 1,254 | 8,761 | 699 | 693 | 616 | 10 | 590 | 6 | 10 |
| NATIONAL OCEANIC AND ATMOS. ADMIN. | 4,282 | 3,816 | 2,087 | 1,543 | 129 | 57 | 466 | 350 | 36 | - | 80 |
| OFFICE OF BUSINESS ECONOMICS..... | 190 | 190 | 190 | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 162 | 162 | - | - | - | 162 | - | - | - | - | - |
| PATENT OFFICE..... | 54,724 | 54,724 | 45,129 | 9,020 | - | 575 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 149,954 | 85,709 | 16,503 | 50,361 | 13,794 | 5,051 | 64,245 | 10,293 | 13,214 | 4,788 | 35,950 |
| DEPARTMENT OF THE ARMY..... | 69,755 | 55,740 | 10,028 | 35,132 | 9,463 | 1,117 | 14,015 | 2,586 | 8,739 | 2,414 | 276 |
| DEPARTMENT OF THE NAVY..... | 16,850 | 8,170 | 2,280 | 2,960 | 1,570 | 1,360 | 8,680 | 2,790 | 2,420 | 2,070 | 1,400 |
| DEPARTMENT OF THE AIR FORCE..... | 17,220 | 9,268 | 3,478 | 2,145 | 2,620 | 1,025 | 7,952 | 4,634 | 595 | 249 | 2,474 |
| DEFENSE AGENCIES..... | 46,114 | 12,531 | 717 | 10,124 | 141 | 1,549 | 33,583 | 283 | 1,445 | 55 | 31,800 |
| DEPARTMENT-WIDE FUNDS..... | 15 | - | - | - | - | - | 15 | - | 15 | - | - |
| DEPT HEALTH, ED, & WELFARE, TOTAL.. | 67,866 | 30,795 | 4,384 | 18,910 | 2,169 | 5,332 | 37,071 | 2,396 | 19,452 | 4,298 | 10,925 |
| FOOD AND DRUG ADMINISTRATION..... | 5,636 | 2,449 | 270 | 2,095 | 61 | 23 | 3,187 | 105 | 2,972 | - | 110 |
| HEALTH SERV & MENTAL HEALTH ADM.... | 9,955 | 3,541 | 1,565 | 1,777 | 184 | 15 | 6,414 | 893 | 1,395 | 1,230 | 2,896 |
| NATIONAL INSTITUTES OF HEALTH..... | 40,179 | 23,519 | 2,067 | 14,308 | 1,850 | 5,294 | 16,660 | 1,398 | 9,875 | 1,018 | 4,369 |
| OFFICE OF EDUCATION..... | 11,730 | 920 | 190 | 730 | - | - | 10,810 | - | 5,210 | 2,550 | 3,550 |
| SOCIAL SECURITY ADMINISTRATION..... | 366 | 366 | 292 | - | 74 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL.. | 13,987 | 13,532 | 6,636 | 4,971 | 599 | 1,326 | 455 | 43 | 398 | 14 | - |
| BUREAU OF MINES..... | 841 | 841 | 472 | 269 | 100 | - | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 21 | 21 | 12 | 7 | 2 | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 503 | 490 | 72 | 387 | 31 | - | 13 | - | 13 | - | - |
| BUREAU OF SPORT FISH & WILDLIFE.... | 813 | 678 | 284 | 231 | 163 | - | 135 | - | 135 | - | - |
| OFFICE OF LIBRARY SERVICES..... | 912 | 912 | - | 908 | 4 | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 9,823 | 9,823 | 5,731 | 2,477 | 289 | 1,326 | - | - | - | - | - |
| OFFICE OF COAL RESEARCH..... | 22 | - | - | - | - | - | 22 | 18 | - | 4 | - |
| OFFICE OF SALINE WATER..... | 140 | 105 | 65 | 30 | 10 | - | 35 | 25 | - | 10 | - |
| OFFICE OF WATER RESOURCES RESEARCH | 912 | 662 | - | 662 | - | - | 250 | - | 250 | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 50 | - | - | - | - | - | 50 | - | - | 50 | - |

| DEPARTMENT OF COMMERCE, TOTAL..... | 71,850 | 70,756 | 48,885 | 19,391 | 855 | 1,625 | 1,094 | 360 | 626 | 18 | 90 |
|---|--|--------|--------|--------|--------|-------|--------|--------|--------|-------|--------|
| BUREAU OF THE CENSUS..... | 469 | 457 | 225 | 67 | 27 | 138 | 12 | - | - | 12 | - |
| NATIONAL BUREAU OF STANDARDS..... | 12,023 | 11,407 | 1,254 | 8,761 | 699 | 693 | 616 | 10 | 590 | 6 | 10 |
| NATIONAL OCEANIC AND ATMOS. ADMIN..... | 4,282 | 3,816 | 2,087 | 1,543 | 129 | 57 | 466 | 350 | 36 | - | 80 |
| OFFICE OF BUSINESS ECONOMICS..... | 190 | 190 | - | - | - | - | - | - | - | - | - |
| OFFICE OF TELECOMMUNICATIONS..... | 162 | 162 | - | - | - | 162 | - | - | - | - | - |
| PATENT OFFICE..... | 54,724 | 54,724 | 45,129 | 9,020 | - | 575 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 149,954 | 85,709 | 16,503 | 50,361 | 13,794 | 5,051 | 64,245 | 10,293 | 13,214 | 4,788 | 35,950 |
| DEPARTMENT OF THE ARMY..... | 69,755 | 55,740 | 10,028 | 35,132 | 9,463 | 1,117 | 14,015 | 2,586 | 8,739 | 2,414 | 276 |
| DEPARTMENT OF THE NAVY..... | 16,850 | 8,170 | 2,280 | 2,960 | 1,570 | 1,360 | 8,680 | 2,790 | 2,420 | 2,070 | 1,400 |
| DEPARTMENT OF THE AIR FORCE..... | 17,220 | 9,268 | 3,478 | 2,145 | 2,620 | 1,025 | 7,952 | 4,634 | 595 | 249 | 2,474 |
| DEFENSE AGENCIES..... | 46,114 | 12,531 | 717 | 10,124 | 141 | 1,549 | 33,583 | 283 | 1,445 | 55 | 31,830 |
| DEPARTMENT-WIDE FUNDS..... | 15 | - | - | - | - | - | 15 | - | 15 | - | - |
| DEPT HEALTH, ED, & WELFARE, TOTAL..... | 67,866 | 30,795 | 4,384 | 18,910 | 2,169 | 5,332 | 37,071 | 2,336 | 19,452 | 4,298 | 10,925 |
| FOOD AND DRUG ADMINISTRATION..... | 5,636 | 2,449 | 270 | 2,095 | 61 | 23 | 3,187 | 105 | 2,972 | - | 110 |
| HEALTH SERV & MENTAL HEALTH..... | 9,955 | 3,541 | 1,565 | 1,777 | 184 | 15 | 6,414 | 893 | 1,395 | 1,230 | 2,896 |
| NATIONAL INSTITUTES OF HEALTH..... | 40,179 | 23,519 | 2,067 | 14,308 | 1,850 | 5,294 | 16,660 | 1,398 | 9,875 | 1,018 | 4,369 |
| OFFICE OF EDUCATION..... | 11,730 | 920 | 190 | 730 | - | - | 10,810 | - | 5,210 | 2,350 | 3,550 |
| SOCIAL SECURITY ADMINISTRATION..... | 366 | 366 | 292 | - | 74 | - | - | - | - | - | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 13,987 | 13,532 | 6,636 | 4,971 | 599 | 1,326 | 455 | 43 | 398 | 14 | - |
| BUREAU OF MINES..... | 841 | 841 | 472 | 269 | 100 | - | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | 21 | 21 | 12 | 7 | 2 | - | - | - | - | - | - |
| BUREAU OF RECLAMATION..... | 503 | 490 | 72 | 387 | 31 | - | 13 | - | 13 | - | - |
| BUREAU OF SPORT FISH & WILDLIFE..... | 813 | 678 | 284 | 231 | 163 | - | 135 | - | 135 | - | - |
| OFFICE OF LIBRARY SERVICES..... | 912 | 912 | - | 908 | 4 | - | - | - | - | - | - |
| GEOLOGICAL SURVEY..... | 9,823 | 9,823 | 5,731 | 2,477 | 289 | 1,326 | - | - | - | - | - |
| OFFICE OF COAL RESEARCH..... | 22 | - | - | - | - | - | 22 | 18 | - | 4 | - |
| OFFICE OF SALINE WATER..... | 140 | 105 | 65 | 30 | 10 | - | 35 | 25 | - | 10 | - |
| OFFICE OF WATER RESOURCES RESEARCH..... | 912 | 662 | - | 662 | - | - | 250 | - | 250 | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | 50 | - | - | - | - | - | 50 | - | - | 50 | - |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | 50 | - | - | - | - | - | 50 | - | - | 50 | - |
| DEPARTMENT OF LABOR, TOTAL..... | 132 | 132 | 92 | 40 | - | - | - | - | - | - | - |
| MANPOWER ADMINISTRATION..... | 132 | 132 | 92 | 40 | - | - | - | - | - | - | - |
| DEPARTMENT OF STATE, TOTAL..... | 2,319 | 1,663 | - | 1,663 | - | - | 656 | 578 | - | 78 | - |
| DEPARTMENTAL FUNDS..... | 107 | 107 | - | 107 | - | - | - | - | - | 78 | - |
| AGENCY FOR INTERNATIONAL DEVELOP..... | 2,212 | 1,556 | - | 1,556 | - | - | 656 | 578 | - | - | - |
| DEPT. OF TRANSPORTATION, TOTAL..... | 4,460 | 2,878 | 106 | 2,714 | 58 | - | 1,582 | 134 | 1,418 | - | 30 |
| FEDERAL AVIATION ADMINISTRATION..... | 546 | 467 | 26 | 413 | 28 | - | 79 | 21 | 58 | - | - |
| FEDERAL HIGHWAY ADMINISTRATION..... | 1,460 | 375 | 80 | 265 | 30 | - | 1,085 | 85 | 1,000 | - | - |
| NAT'L HIGHWAY TRAFFIC SAFETY ADMIN..... | 493 | 205 | - | 205 | - | - | 288 | 28 | 260 | - | - |
| OFFICE OF THE SECRETARY..... | 1,545 | 1,415 | - | 1,415 | - | - | 130 | - | 100 | - | 30 |
| UNITED STATES COAST GUARD..... | 416 | 416 | - | 416 | - | - | - | - | - | - | - |
| OTHER AGENCIES | ADVIS COMM ON INTERGOVT RELATIONS..... | 55 | 55 | 20 | 5 | - | - | - | - | - | - |
| ATOMIC ENERGY COMMISSION..... | 4,970 | 3,209 | 1,821 | 1,388 | - | - | 1,761 | 715 | 950 | 96 | - |
| ENVIRONMENTAL PROTECTION AGENCY..... | 3,087 | 2,059 | 1,037 | 549 | 254 | 219 | 1,028 | 121 | 533 | 202 | 172 |
| FEDERAL COMMUNICATIONS COMMISSION..... | 17 | 17 | 5 | 5 | 7 | - | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 33 | 33 | - | 33 | - | - | - | - | - | - | - |
| LIBRARY OF CONGRESS..... | 32,444 | 32,444 | - | 28,515 | 13 | 3,916 | - | - | - | - | - |
| NATIONAL AERONAUTICS & SPACE ADMIN..... | 27,877 | 13,759 | 4,483 | 5,923 | 2,306 | 1,047 | 14,118 | 5,779 | 6,021 | 2,083 | 235 |
| NATIONAL SCIENCE FOUNDATION..... | 12,582 | 1,330 | 88 | 622 | 103 | 517 | 11,252 | 415 | 3,042 | 575 | 7,220 |
| OFFICE OF EMERGENCY PREPAREDNESS..... | 3 | 3 | - | 3 | - | - | - | - | - | - | - |
| OFFICE OF SCIENCE AND TECHNOLOGY..... | 150 | 150 | 40 | 70 | 10 | 30 | - | - | - | - | - |
| SMALL BUSINESS ADMINISTRATION..... | 5 | 5 | 5 | - | - | - | - | - | - | - | - |
| SMITHSONIAN INSTITUTION..... | 4,064 | 2,589 | 1,419 | 855 | 165 | 150 | 1,475 | - | 1,400 | 75 | - |
| TENNESSEE VALLEY AUTHORITY..... | 123 | 123 | - | 123 | - | - | - | - | - | - | - |
| US ARMS CONTROL & DISARMAMENT AGENCY..... | 274 | 274 | 182 | 65 | 2 | 25 | - | - | - | - | - |
| VETERANS ADMINISTRATION..... | 6,200 | 6,160 | 600 | 3,100 | 2,160 | 300 | 40 | 15 | - | 25 | - |

Appendix E

statistical tables, part III

federal funds for collection of general-purpose scientific data

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NOTES

- Source of data is the National Science Foundation.
- Estimates for 1972 are based on **The Budget, FY 1972**, as submitted to Congress, and do not reflect subsequent appropriation and apportionment actions.
- The National Oceanic and Atmospheric Administration (NOAA) was established in fiscal year 1971 within the Department of Commerce. NOAA includes Commerce's Environmental Science Services Administration (ESSA), which is its largest component. It also has incorporated from Interior the Bureau of Commercial Fisheries, the marine sport fish activities of the Fish and Wildlife Service, and the Marine Minerals Technology Center of the Bureau of Mines. NOAA has taken over the Army Corps of Engineers' Great Lakes Survey and the Navy's National Oceanographic Data Center and National Oceanographic Instrumentation Center. From the Department of Transportation it has taken the data buoy development activities of the Coast Guard and from the National Science Foundation, its Sea Grant Programs. These agency subdivisions' general-purpose data collection activities are reported for fiscal year 1970 as though they had been part of NOAA that year.

TABLE E-1. SUMMARY OF FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA,
FISCAL YEARS 1970, 1971, AND 1972
(THOUSANDS OF DOLLARS)

| PERFORMER AND ACTIVITY | ACTUAL, 1970 | | | ESTIMATES | | | | | |
|---|--------------|----------------------|---------------------|-----------|----------------------|---------------------|---------|----------------------|---------------------|
| | TOTAL | NATURAL PHENOMENA | SOCIAL PHENOMENA | 1971 | | | 1972 | | |
| | | | | TOTAL | NATURAL PHENOMENA | SOCIAL PHENOMENA | TOTAL | NATURAL PHENOMENA | SOCIAL PHENOMENA |
| TOTAL OBLIGATIONS FOR COLLECTION OF GENERAL PURPOSE SCIENTIFIC DATA..... | 549,908 | 308,980 | 240,928 | 525,782 | 335,624 | 190,158 | 536,811 | 371,442 | 165,369 |
| BY PERFORMER | | | | | | | | | |
| INTRAMURAL..... | 533,182 | 299,824 | 233,358 | 508,992 | 327,183 | 181,809 | 519,225 | 362,018 | 157,207 |
| EXTRAMURAL..... | 16,726 | 9,156 | 7,570 | 16,790 | 8,441 | 8,349 | 17,586 | 9,424 | 8,162 |
| BY ACTIVITY | | | | | | | | | |
| GATHERING, PROCESSING AND COLLATING..... | 397,799 | 183,559 | 214,240 | 356,807 | 200,486 | 156,321 | 356,071 | 224,777 | 131,294 |
| ANALYSIS..... | 50,573 | 36,275 | 14,298 | 56,980 | 40,624 | 16,356 | 62,064 | 44,768 | 17,276 |
| PUBLICATION..... | 41,781 | 35,652 | 6,129 | 51,972 | 43,308 | 8,664 | 55,503 | 45,477 | 10,026 |
| EQUIPMENT FOR DATA GATHERING, PROCESSING AND COLLATING..... | 59,755 | 53,494 | 6,261 | 60,023 | 51,206 | 8,817 | 63,173 | 56,400 | 6,773 |

TABLE E-2. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY,
FISCAL YEARS 1970, 1971, AND 1972
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | ACTUAL, 1970 | ESTIMATES | |
|--|--------------|-----------|---------|
| | | 1971 | 1972 |
| TOTAL, ALL AGENCIES..... | 549,908 | 525,782 | 536,811 |
| DEPARTMENTS | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 41,783 | 43,817 | 43,751 |
| AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE..... | 48 | 41 | 43 |
| FARMER COOPERATIVE SERVICE..... | 98 | 98 | 104 |
| SOIL CONSERVATION SERVICE..... | 23,467 | 25,727 | 25,437 |
| STATISTICAL REPORTING SERVICE..... | 18,170 | 17,951 | 18,167 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 311,388 | 274,036 | 266,095 |
| BUREAU OF THE CENSUS..... | 147,570 | 86,356 | 50,563 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 163,818 | 187,680 | 215,532 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 67,361 | 63,854 | 69,154 |
| DEPARTMENT OF THE ARMY..... | 4,558 | 4,482 | 5,003 |
| DEPARTMENT OF THE NAVY..... | 62,803 | 59,372 | 64,151 |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | 14,735 | 19,534 | 22,966 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | 9,499 | 12,837 | 15,701 |
| NATIONAL INSTITUTES OF HEALTH..... | 130 | 304 | 314 |
| OFFICE OF EDUCATION..... | 4,497 | 5,621 | 5,990 |
| SOCIAL SECURITY ADMINISTRATION..... | 609 | 772 | 961 |
| DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT..... | 767 | 600 | 1,700 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 50,731 | 53,936 | 56,345 |
| BUREAU OF LAND MANAGEMENT..... | 33 | 40 | 42 |
| BUREAU OF MINES..... | 4,003 | 4,138 | 4,223 |
| BUREAU OF OUTDOOR RECREATION..... | 15 | 25 | 30 |
| GEOLOGICAL SURVEY..... | 46,680 | 49,733 | 52,050 |
| DEPARTMENT OF JUSTICE, TOTAL..... | 1,343 | 2,349 | 2,666 |
| FEDERAL BUREAU OF INVESTIGATION..... | 1,009 | 1,257 | 1,397 |
| IMMIGRATION AND NATURALIZATION SERVICE..... | 324 | 492 | 519 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | 10 | 600 | 750 |
| DEPARTMENT OF LABOR, TOTAL..... | 20,824 | 24,163 | 29,796 |

TOTAL, ALL AGENCIES.....

DEPARTMENTS

DEPARTMENT OF AGRICULTURE, TOTAL.....

AGRICULTURAL STABILIZATION AND CONSERVATION SERVICE.....

FARMER COOPERATIVE SERVICE.....

SOIL CONSERVATION SERVICE.....

STATISTICAL REPORTING SERVICE.....

DEPARTMENT OF COMMERCE, TOTAL.....

BUREAU OF THE CENSUS.....

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.....

DEPARTMENT OF DEFENSE, TOTAL.....

DEPARTMENT OF THE ARMY.....

DEPARTMENT OF THE NAVY.....

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL.....

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION.....

NATIONAL INSTITUTES OF HEALTH.....

OFFICE OF EDUCATION.....

SOCIAL SECURITY ADMINISTRATION.....

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.....

DEPARTMENT OF THE INTERIOR, TOTAL.....

BUREAU OF LAND MANAGEMENT.....

BUREAU OF MINES.....

BUREAU OF OUTDOOR RECREATION.....

GEOLOGICAL SURVEY.....

DEPARTMENT OF JUSTICE, TOTAL.....

FEDERAL BUREAU OF INVESTIGATION.....

IMMIGRATION AND NATURALIZATION SERVICE.....

LAW ENFORCEMENT ASSISTANCE ADMINISTRATION.....

DEPARTMENT OF LABOR, TOTAL.....

BUREAU OF LABOR STATISTICS.....

DEPARTMENT OF STATE, TOTAL.....

DEPARTMENTAL FUNDS.....

AGENCY FOR INTERNATIONAL DEVELOPMENT.....

DEPARTMENT OF TRANSPORTATION, TOTAL.....

FEDERAL AVIATION ADMINISTRATION.....

UNITED STATES COAST GUARD.....

DEPARTMENT OF THE TREASURY, TOTAL.....

INTERNAL REVENUE SERVICE.....

OTHER AGENCIES

FEDERAL COMMUNICATIONS COMMISSION.....

FEDERAL HOME LOAN BANK BOARD.....

FEDERAL POWER COMMISSION.....

FEDERAL TRADE COMMISSION.....

NATIONAL SCIENCE FOUNDATION.....

OFFICE OF ECONOMIC OPPORTUNITY.....

SECURITIES AND EXCHANGE COMMISSION.....

SMITHSONIAN INSTITUTION.....

TENNESSEE VALLEY AUTHORITY.....

UNITED STATES TARIFF COMMISSION.....

| | | |
|---------|---------|---------|
| 549,908 | 525,782 | 536,811 |
| 41,783 | 43,817 | 43,751 |
| 48 | 41 | 43 |
| 98 | 98 | 104 |
| 23,467 | 25,727 | 25,437 |
| 18,170 | 17,951 | 18,167 |
| 311,388 | 274,036 | 266,095 |
| 147,570 | 86,356 | 50,563 |
| 163,818 | 187,680 | 215,532 |
| 67,361 | 63,854 | 69,154 |
| 4,558 | 4,482 | 5,003 |
| 62,803 | 59,372 | 64,151 |
| 14,735 | 19,534 | 22,966 |
| 9,499 | 12,837 | 15,701 |
| 130 | 304 | 314 |
| 4,497 | 5,621 | 5,990 |
| 609 | 772 | 961 |
| 767 | 600 | 1,700 |
| 50,731 | 53,936 | 56,345 |
| 33 | 40 | 42 |
| 4,003 | 4,138 | 4,223 |
| 15 | 25 | 30 |
| 46,680 | 49,733 | 52,050 |
| 1,343 | 2,349 | 2,666 |
| 1,009 | 1,257 | 1,397 |
| 324 | 492 | 519 |
| 10 | 600 | 750 |
| 20,824 | 24,163 | 29,796 |
| 20,824 | 24,163 | 29,796 |
| 475 | 538 | 405 |
| 125 | 146 | 146 |
| 350 | 392 | 259 |
| 21,047 | 22,839 | 24,488 |
| 12,809 | 13,705 | 14,694 |
| 8,236 | 9,134 | 9,794 |
| 6,799 | 7,060 | 7,016 |
| 6,799 | 7,060 | 7,016 |
| 24 | 28 | 31 |
| 1,078 | 1,438 | 1,841 |
| 1,305 | 1,537 | 1,606 |
| 373 | 349 | 422 |
| 2,675 | 2,498 | 1,187 |
| 6,080 | 6,125 | 6,050 |
| 408 | 437 | 510 |
| 11 | 37 | 127 |
| 567 | 467 | 493 |
| 134 | 140 | 162 |

TABLE E-3. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA,
BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1970

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | NATURAL PHENOMENA | | | | | SOCIAL PHENOMENA | | | | |
|---|-------------------|--------------------------------------|----------|------------------|---|------------------|--------------------------------------|----------|------------------|---|
| | TOTAL | GATHERING PROCESSING COLLATING | ANALYSIS | PUBLI- CATION | EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING | TOTAL | GATHERING PROCESSING COLLATING | ANALYSIS | PUBLI- CATION | EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING |
| TOTAL, ALL AGENCIES..... | 308,980 | 183,559 | 36,275 | 35,652 | 53,494 | 240,928 | 214,240 | 14,298 | 6,129 | 6,261 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 23,467 | 19,897 | 781 | 2,424 | 365 | 18,316 | 12,991 | 4,195 | 924 | 206 |
| AGRI STABILIZATION & CONSERVATION SERV. | - | - | - | - | - | 48 | 9 | 15 | 24 | - |
| FARMER COOPERATIVE SERVICE..... | - | - | - | - | - | 98 | 48 | 48 | 2 | - |
| SOIL CONSERVATION SERVICE..... | 23,467 | 19,897 | 781 | 2,424 | 365 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | - | - | - | - | - | 18,170 | 12,934 | 4,132 | 898 | 206 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 163,818 | 109,758 | 22,935 | 19,658 | 11,467 | 147,570 | 144,069 | 511 | 1,326 | 1,664 |
| BUREAU OF THE CENSUS..... | - | - | - | - | - | 147,570 | 144,069 | 511 | 1,326 | 1,664 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 163,818 | 109,758 | 22,935 | 19,658 | 11,467 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 66,133 | 13,925 | 5,878 | 8,113 | 38,217 | 1,228 | 1,044 | 25 | 61 | 98 |
| DEPARTMENT OF THE ARMY..... | 3,330 | 2,265 | 466 | 366 | 233 | 1,228 | 1,044 | 25 | 61 | 98 |
| DEPARTMENT OF THE NAVY..... | 62,803 | 11,660 | 5,412 | 7,747 | 37,984 | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | - | - | - | - | - | 14,735 | 11,991 | 1,637 | 489 | 618 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | - | - | - | - | - | 9,499 | 8,344 | 803 | 302 | 50 |
| NATIONAL INSTITUTES OF HEALTH..... | - | - | - | - | - | 130 | 120 | 6 | 2 | 2 |
| OFFICE OF EDUCATION..... | - | - | - | - | - | 4,497 | 2,937 | 828 | 170 | 562 |
| SOCIAL SECURITY ADMINISTRATION..... | - | - | - | - | - | 609 | 590 | - | 15 | 4 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | - | - | - | - | - | 767 | 345 | 230 | 192 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 46,680 | 31,471 | 6,551 | 5,213 | 3,445 | 4,051 | 2,692 | 686 | 548 | 175 |
| BUREAU OF LAND MANAGEMENT..... | - | - | - | - | - | 33 | 27 | - | 6 | - |
| BUREAU OF MINES..... | - | - | - | - | - | 4,003 | 2,655 | 686 | 537 | 125 |
| BUREAU OF OUTDOOR RECREATION..... | - | - | - | - | - | 15 | 10 | - | 5 | - |
| GEOLOGICAL SURVEY..... | 46,680 | 31,471 | 6,551 | 5,213 | 3,445 | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | - | - | 1,343 | 932 | 163 | 128 | 120 |
| FEDERAL BUREAU OF INVESTIGATION..... | - | - | - | - | - | 1,009 | 666 | 144 | 117 | 82 |
| IMMIGRATION & NATURALIZATION SERVICE... | - | - | - | - | - | 324 | 266 | 19 | 1 | 38 |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | - | - | - | - | - | 10 | - | - | 10 | - |
| DEPARTMENT OF LABOR, TOTAL..... | - | - | - | - | - | 20,824 | 15,849 | 3,840 | 752 | 383 |
| BUREAU OF LABOR STATISTICS..... | - | - | - | - | - | 20,824 | 15,849 | 3,840 | 752 | 383 |
| DEPARTMENT OF STATE, TOTAL..... | 66 | 66 | - | - | - | 409 | 389 | - | 20 | - |
| DEPARTMENTAL FUNDS..... | - | - | - | - | - | 125 | 105 | - | 20 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | 66 | 66 | - | - | - | 284 | 284 | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL.... | 8,238 | 8,238 | - | - | - | 12,809 | 11,867 | 516 | 293 | 133 |
| FEDERAL AVIATION ADMINISTRATION..... | - | - | - | - | - | 12,809 | 11,867 | 516 | 293 | 133 |
| UNITED STATES COAST GUARD..... | 8,238 | 8,238 | - | - | - | - | - | - | - | - |

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TABLE E-4. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA,
BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1971 (ESTIMATED)
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | NATURAL PHENOMENA | | | | | SOCIAL PHENOMENA | | | | |
|---|-------------------|--------------------------------------|----------|------------------|---|------------------|--------------------------------------|----------|------------------|---|
| | TOTAL | GATHERING PROCESSING COLLATING | ANALYSIS | PUBLI- CATION | EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING | TOTAL | GATHERING PROCESSING COLLATING | ANALYSIS | PUBLI- CATION | EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING |
| TOTAL, ALL AGENCIES..... | 335,624 | 200,486 | 40,624 | 43,308 | 51,206 | 190,158 | 156,321 | 16,356 | 8,664 | 8,817 |
| DEPARTMENTS | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 25,727 | 19,754 | 857 | 4,693 | 423 | 18,090 | 12,847 | 4,148 | 908 | 187 |
| AGRI STABILIZATION & CONSERVATION SERV. | - | - | - | - | - | 41 | 8 | 14 | 19 | - |
| FARMER COOPERATIVE SERVICE..... | - | - | - | - | - | 98 | 48 | 48 | 2 | - |
| SOIL CONSERVATION SERVICE..... | 25,727 | 19,754 | 857 | 4,693 | 423 | - | - | - | - | - |
| STATISTICAL REPORTING SERVICE..... | - | - | - | - | - | 17,951 | 12,791 | 4,086 | 887 | 187 |
| DEPARTMENT OF COMMERCE, TOTAL..... | 187,680 | 125,746 | 26,275 | 22,522 | 13,137 | 86,356 | 79,296 | 672 | 2,739 | 3,649 |
| BUREAU OF THE CENSUS..... | - | - | - | - | - | 86,356 | 79,296 | 672 | 2,739 | 3,649 |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 187,680 | 125,746 | 26,275 | 22,522 | 13,137 | - | - | - | - | - |
| DEPARTMENT OF DEFENSE, TOTAL..... | 62,624 | 11,889 | 6,295 | 10,212 | 34,228 | 1,230 | 1,045 | 25 | 61 | 99 |
| DEPARTMENT OF THE ARMY..... | 3,252 | 2,211 | 455 | 358 | 228 | 1,230 | 1,045 | 25 | 61 | 99 |
| DEPARTMENT OF THE NAVY..... | 59,372 | 9,678 | 5,840 | 9,854 | 34,000 | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | - | - | - | - | - | 19,534 | 15,531 | 1,965 | 869 | 1,169 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | - | - | - | - | - | 12,837 | 10,729 | 894 | 656 | 558 |
| NATIONAL INSTITUTES OF HEALTH..... | - | - | - | - | - | 304 | 288 | 11 | 3 | 2 |
| OFFICE OF EDUCATION..... | - | - | - | - | - | 5,621 | 3,757 | 1,060 | 200 | 604 |
| SOCIAL SECURITY ADMINISTRATION..... | - | - | - | - | - | 772 | 757 | - | 10 | 5 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | - | - | - | - | - | 600 | 250 | 200 | 150 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 49,733 | 33,607 | 7,045 | 5,665 | 3,416 | 4,203 | 2,763 | 703 | 587 | 150 |
| BUREAU OF LAND MANAGEMENT..... | - | - | - | - | - | 40 | 33 | - | 7 | - |
| BUREAU OF MINES..... | - | - | - | - | - | 4,131 | 2,715 | 703 | 570 | 150 |
| BUREAU OF OUTDOOR RECREATION..... | - | - | - | - | - | 25 | 15 | - | 10 | - |
| GEOLOGICAL SURVEY..... | 49,733 | 33,607 | 7,045 | 5,665 | 3,416 | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | - | - | 2,349 | 1,212 | 195 | 736 | 206 |
| FEDERAL BUREAU OF INVESTIGATION..... | - | - | - | - | - | 1,257 | 779 | 175 | 135 | 168 |
| IMMIGRATION & NATURALIZATION SERVICE... | - | - | - | - | - | 492 | 433 | 20 | 1 | 38 |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | - | - | - | - | - | 600 | - | - | 600 | - |
| DEPARTMENT OF LABOR, TOTAL..... | - | - | - | - | - | 24,163 | 17,912 | 5,111 | 875 | 265 |
| BUREAU OF LABOR STATISTICS..... | - | - | - | - | - | 24,163 | 17,912 | 5,111 | 875 | 265 |
| DEPARTMENT OF STATE, TOTAL..... | 69 | 69 | - | - | - | 469 | 453 | - | 16 | - |

NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.

| | | | | | | | | | | |
|--|---------|---------|--------|--------|--------|--------|--------|-------|-------|-------|
| DEPARTMENT OF DEFENSE, TOTAL..... | 137,680 | 125,746 | 26,275 | 22,522 | 13,137 | 86,356 | 79,296 | 672 | 2,739 | 3,649 |
| DEPARTMENT OF THE ARMY..... | 62,624 | 11,889 | 6,295 | 10,212 | 34,228 | 1,230 | 1,045 | 25 | 61 | 99 |
| DEPARTMENT OF THE NAVY..... | 3,252 | 2,211 | 455 | 358 | 228 | 1,230 | 1,045 | 25 | 61 | 99 |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | 59,372 | 9,678 | 5,840 | 9,854 | 34,000 | - | - | - | - | - |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | - | - | - | - | - | 19,534 | 15,531 | 1,965 | 869 | 1,169 |
| NATIONAL INSTITUTES OF HEALTH..... | - | - | - | - | - | 12,837 | 10,729 | 894 | 656 | 558 |
| OFFICE OF EDUCATION..... | - | - | - | - | - | 304 | 288 | 11 | 3 | 2 |
| SOCIAL SECURITY ADMINISTRATION..... | - | - | - | - | - | 5,621 | 3,757 | 1,060 | 200 | 604 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | - | - | - | - | - | 772 | 757 | - | 10 | 5 |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 49,733 | 33,607 | 7,045 | 5,665 | 3,416 | 600 | 250 | 200 | 150 | - |
| BUREAU OF LAND MANAGEMENT..... | - | - | - | - | - | 4,203 | 2,763 | 703 | 587 | 150 |
| BUREAU OF MINES..... | - | - | - | - | - | - | - | - | - | - |
| BUREAU OF OUTDOOR RECREATION..... | - | - | - | - | - | 40 | 33 | - | 7 | - |
| GEOLOGICAL SURVEY..... | 49,733 | 33,607 | 7,045 | 5,665 | 3,416 | 4,138 | 2,715 | 703 | 570 | 150 |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | - | - | 25 | 15 | - | 10 | - |
| FEDERAL BUREAU OF INVESTIGATION..... | - | - | - | - | - | - | - | - | - | - |
| IMMIGRATION & NATURALIZATION SERVICE... | - | - | - | - | - | 2,349 | 1,212 | 195 | 736 | 206 |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | - | - | - | - | - | 1,257 | 779 | 175 | 135 | 168 |
| DEPARTMENT OF LABOR, TOTAL..... | - | - | - | - | - | 492 | 433 | 20 | 1 | 38 |
| BUREAU OF LABOR STATISTICS..... | - | - | - | - | - | 600 | - | - | 600 | - |
| DEPARTMENT OF STATE, TOTAL..... | 69 | 69 | - | - | - | - | - | - | - | - |
| DEPARTMENTAL FUNDS..... | 69 | 69 | - | - | - | - | - | - | - | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | - | - | - | - | - | 469 | 453 | - | 16 | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 9,134 | 9,134 | - | - | - | - | - | - | - | - |
| FEDERAL AVIATION ADMINISTRATION..... | - | - | - | - | - | 13,705 | 12,705 | 468 | 349 | 184 |
| UNITED STATES COAST GUARD..... | 9,134 | 9,134 | - | - | - | 13,705 | 12,705 | 468 | 348 | 184 |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | - | - | - | - | - | - |
| INTERNAL REVENUE SERVICE..... | - | - | - | - | - | 7,060 | 5,835 | 740 | 175 | 310 |
| OTHER AGENCIES | - | - | - | - | - | 7,060 | 5,835 | 740 | 175 | 310 |
| FEDERAL COMMUNICATIONS COMMISSION..... | - | - | - | - | - | - | - | - | - | - |
| FEDERAL HOME LOAN BANK BOARD..... | 153 | 91 | 45 | 15 | - | 28 | 20 | 4 | 4 | - |
| FEDERAL POWER COMMISSION..... | - | - | - | - | - | 1,438 | 1,048 | 262 | 128 | - |
| FEDERAL TRADE COMMISSION..... | - | - | - | - | - | 818 | 818 | 409 | 136 | - |
| NATIONAL SCIENCE FOUNDATION..... | - | - | - | - | - | 349 | 328 | 15 | 6 | 21 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | - | - | - | - | - | 2,498 | 1,190 | 1,034 | 274 | - |
| SECURITIES AND EXCHANGE COMMISSION..... | - | - | - | - | - | 6,125 | 2,643 | 360 | 610 | - |
| SMITHSONIAN INSTITUTION..... | 37 | 37 | - | - | - | 437 | 360 | - | 12 | 2,512 |
| TENNESSEE VALLEY AUTHORITY..... | 467 | 159 | 107 | 201 | - | - | - | - | - | 65 |
| UNITED STATES TARIFF COMMISSION..... | - | - | - | - | - | 140 | 65 | 45 | 10 | - |

TABLE E-5. FEDERAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA,
BY AGENCY, PHENOMENA, AND ACTIVITY, FISCAL YEAR 1972 (ESTIMATED)

(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | NATURAL PHENOMENA | | | | | | SOCIAL PHENOMENA | | | | | |
|--|-------------------|--------------------------------------|----------|------------------|---|---------|--------------------------------------|----------|------------------|---|-------|--------------------------------------|
| | TOTAL | GATHERING PROCESSING COLLATING | ANALYSIS | PUBLI- CATION | EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING | TOTAL | GATHERING PROCESSING COLLATING | ANALYSIS | PUBLI- CATION | EQUIPMENT FOR DATA GATHERING PROCESSING COLLATING | TOTAL | GATHERING PROCESSING COLLATING |
| TOTAL, ALL AGENCIES..... | 371,442 | 224,777 | 44,788 | 45,477 | 56,400 | 165,369 | 131,294 | 17,276 | 10,026 | 6,773 | | |
| DEPARTMENTS | | | | | | | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 25,437 | 20,924 | 782 | 3,431 | 300 | 18,314 | 13,005 | 4,201 | 921 | 187 | | |
| AGRI STABILIZATION & CONSERVATION SERV. | - | - | - | - | - | 43 | 8 | 15 | 20 | - | | |
| FARMER COOPERATIVE SERVICE..... | - | - | - | - | - | 104 | 51 | 51 | 2 | - | | |
| SOIL CONSERVATION SERVICE..... | 25,437 | 20,924 | 782 | 3,431 | 300 | - | - | - | - | - | | |
| STATISTICAL REPORTING SERVICE..... | - | - | - | - | - | 18,167 | 12,946 | 4,135 | 899 | 187 | | |
| DEPARTMENT OF COMMERCE, TOTAL..... | 215,532 | 144,406 | 30,174 | 25,864 | 15,088 | 50,563 | 46,223 | 678 | 3,268 | 394 | | |
| BUREAU OF THE CENSUS..... | - | - | - | - | - | 50,563 | 46,223 | 678 | 3,268 | 394 | | |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | 215,532 | 144,406 | 30,174 | 25,864 | 15,088 | - | - | - | - | - | | |
| DEPARTMENT OF DEFENSE, TOTAL..... | 67,848 | 13,946 | 6,387 | 10,068 | 37,447 | 1,306 | 1,110 | 26 | 65 | 105 | | |
| DEPARTMENT OF THE ARMY..... | 3,697 | 2,514 | 517 | 407 | 259 | 1,306 | 1,110 | 26 | 65 | 105 | | |
| DEPARTMENT OF THE NAVY..... | 64,151 | 11,432 | 5,870 | 9,661 | 37,188 | - | - | - | - | - | | |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL | - | - | - | - | - | 22,966 | 17,993 | 1,947 | 1,001 | 2,025 | | |
| HEALTH SERVICES & MENTAL HEALTH ADMIN. | - | - | - | - | - | 15,701 | 12,784 | 813 | 762 | 1,342 | | |
| NATIONAL INSTITUTES OF HEALTH..... | - | - | - | - | - | 314 | 293 | 14 | 4 | 3 | | |
| OFFICE OF EDUCATION..... | - | - | - | - | - | 5,990 | 3,970 | 1,120 | 225 | 675 | | |
| SOCIAL SECURITY ADMINISTRATION..... | - | - | - | - | - | 961 | 946 | - | 10 | 5 | | |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | - | - | - | - | - | 1,700 | 765 | 510 | 425 | - | | |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 52,050 | 35,317 | 7,285 | 5,886 | 3,562 | 4,295 | 2,814 | 728 | 603 | 150 | | |
| BUREAU OF LAND MANAGEMENT..... | - | - | - | - | - | 42 | 34 | - | 8 | - | | |
| BUREAU OF MINES..... | - | - | - | - | - | 4,223 | 2,765 | 728 | 580 | 150 | | |
| BUREAU OF OUTDOOR RECREATION..... | - | - | - | - | - | 30 | 15 | - | 15 | - | | |
| GEOLOGICAL SURVEY..... | 52,050 | 35,317 | 7,285 | 5,886 | 3,562 | - | - | - | - | - | | |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | - | - | 2,666 | 1,242 | 199 | 887 | 338 | | |
| FEDERAL BUREAU OF INVESTIGATION..... | - | - | - | - | - | 1,397 | 784 | 177 | 136 | 300 | | |
| IMMIGRATION & NATURALIZATION SERVICE... | - | - | - | - | - | 519 | 458 | 22 | 1 | 38 | | |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | - | - | - | - | - | 750 | - | - | 750 | - | | |
| DEPARTMENT OF LABOR, TOTAL..... | - | - | - | - | - | 29,796 | 22,197 | 6,066 | 1,041 | 492 | | |
| BUREAU OF LABOR STATISTICS..... | - | - | - | - | - | 29,796 | 22,197 | 6,066 | 1,041 | 492 | | |
| DEPARTMENT OF STATE, TOTAL..... | - | - | - | - | - | 405 | 389 | - | 16 | - | | |
| DEPARTMENTAL FUNDS..... | - | - | - | - | - | 146 | 130 | - | 16 | - | | |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | - | - | - | - | - | 259 | 259 | - | - | - | | |
| DEPARTMENT OF TRANSPORTATION, TOTAL..... | 9,794 | 9,794 | - | - | - | 14,694 | 13,640 | 499 | 369 | 186 | | |

| | | | | | | | | | | |
|--|--------|--------|-------|--------|--------|--------|--------|-------|-------|-------|
| DEPARTMENT OF DEFENSE, TOTAL..... | 67,848 | 13,946 | 6,387 | 10,068 | 37,447 | 1,306 | 1,110 | 26 | 65 | 105 |
| DEPARTMENT OF THE ARMY..... | 3,697 | 2,514 | 517 | 407 | 259 | 1,306 | 1,110 | 26 | 65 | 105 |
| DEPARTMENT OF THE NAVY..... | 64,151 | 11,432 | 5,870 | 9,661 | 37,188 | - | - | - | - | - |
| DEPT. OF HEALTH, EDUC. & WELFARE, TOTAL..... | - | - | - | - | - | 22,966 | 17,993 | 1,947 | 1,001 | 2,025 |
| HEALTH SERVICES & MENTAL HEALTH ADMIN.. | - | - | - | - | - | 15,701 | 12,784 | 813 | 762 | 1,342 |
| NATIONAL INSTITUTES OF HEALTH..... | - | - | - | - | - | 314 | 293 | 14 | 4 | 3 |
| OFFICE OF EDUCATION..... | - | - | - | - | - | 5,990 | 3,970 | 1,120 | 225 | 675 |
| SOCIAL SECURITY ADMINISTRATION..... | - | - | - | - | - | 961 | 946 | - | 10 | 5 |
| DEPARTMENT OF HOUSING & URBAN DEVELOP.. | - | - | - | - | - | 1,700 | 765 | 510 | 425 | - |
| DEPARTMENT OF THE INTERIOR, TOTAL..... | 52,050 | 35,317 | 7,285 | 5,886 | 3,562 | 4,295 | 2,814 | 728 | 603 | 150 |
| BUREAU OF LAND MANAGEMENT..... | - | - | - | - | - | 42 | 34 | - | 8 | - |
| BUREAU OF MINES..... | - | - | - | - | - | 4,223 | 2,765 | 728 | 580 | 150 |
| BUREAU OF OUTDOOR RECREATION..... | - | - | - | - | - | 30 | 15 | - | 15 | - |
| GEOLOGICAL SURVEY..... | 52,050 | 35,317 | 7,285 | 5,886 | 3,562 | - | - | - | - | - |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | - | - | 2,666 | 1,242 | 199 | 887 | 338 |
| FEDERAL BUREAU OF INVESTIGATION..... | - | - | - | - | - | 1,397 | 784 | 177 | 136 | 300 |
| IMMIGRATION & NATURALIZATION SERVICE... | - | - | - | - | - | 519 | 458 | 22 | 1 | 38 |
| LAW ENFORCEMENT ASSISTANCE ADMIN..... | - | - | - | - | - | 750 | - | - | 750 | - |
| DEPARTMENT OF LABOR, TOTAL..... | - | - | - | - | - | 29,796 | 22,197 | 6,066 | 1,041 | 492 |
| BUREAU OF LABOR STATISTICS..... | - | - | - | - | - | 29,796 | 22,197 | 6,066 | 1,041 | 492 |
| DEPARTMENT OF STATE, TOTAL..... | - | - | - | - | - | 405 | 389 | - | 16 | - |
| DEPARTMENTAL FUNDS..... | - | - | - | - | - | 146 | 130 | - | 16 | - |
| AGENCY FOR INTERNATIONAL DEVELOPMENT... | - | - | - | - | - | 259 | 259 | - | - | - |
| DEPARTMENT OF TRANSPORTATION, TOTAL.... | 9,794 | 9,794 | - | - | - | 14,694 | 13,640 | 499 | 369 | 186 |
| FEDERAL AVIATION ADMINISTRATION..... | - | - | - | - | - | 14,694 | 13,640 | 499 | 369 | 186 |
| UNITED STATES COAST GUARD..... | 9,794 | 9,794 | - | - | - | - | - | - | - | - |
| DEPARTMENT OF THE TREASURY, TOTAL..... | - | - | - | - | - | 7,016 | 5,732 | 756 | 228 | 300 |
| INTERNAL REVENUE SERVICE..... | - | - | - | - | - | 7,016 | 5,732 | 756 | 228 | 300 |
| OTHER AGENCIES | - | - | - | - | - | - | - | - | - | - |
| FEDERAL COMMUNICATIONS COMMISSION..... | - | - | - | - | - | 31 | 21 | 5 | 5 | - |
| FEDERAL HOME LOAN BANK BOARD..... | - | - | - | - | - | 1,841 | 1,342 | 335 | 164 | - |
| FEDERAL POWER COMMISSION..... | 161 | 95 | 47 | 16 | 3 | 1,445 | 853 | 427 | 142 | 23 |
| FEDERAL TRADE COMMISSION..... | - | - | - | - | - | 422 | 400 | 16 | 6 | - |
| NATIONAL SCIENCE FOUNDATION..... | - | - | - | - | - | 1,187 | 471 | 482 | 234 | - |
| OFFICE OF ECONOMIC OPPORTUNITY..... | - | - | - | - | - | 6,050 | 2,630 | 350 | 600 | 2,500 |
| SECURITIES AND EXCHANGE COMMISSION..... | - | - | - | - | - | 510 | 423 | - | 14 | 73 |
| SMITHSONIAN INSTITUTION..... | 127 | 127 | - | - | - | - | - | - | - | - |
| TENNESSEE VALLEY AUTHORITY..... | 493 | 168 | 113 | 212 | - | - | - | - | - | - |
| UNITED STATES TARIFF COMMISSION..... | - | - | - | - | - | 162 | 74 | 51 | 37 | - |

TABLE E-6. FEDERAL EXTRAMURAL OBLIGATIONS FOR COLLECTION OF GENERAL-PURPOSE SCIENTIFIC DATA, BY AGENCY,
FISCAL YEARS 1970, 1971, AND 1972
(THOUSANDS OF DOLLARS)

| AGENCY AND SUBDIVISION | NATURAL PHENOMENA | | | SOCIAL PHENOMENA | | |
|--|-------------------|-----------|-------|------------------|-----------|-------|
| | ACTUAL, 1970 | ESTIMATES | | ACTUAL, 1970 | ESTIMATES | |
| | | 1971 | 1972 | | 1971 | 1972 |
| TOTAL, ALL AGENCIES..... | 9,156 | 8,441 | 9,424 | 7,570 | 8,349 | 8,162 |
| DEPARTMENTS | | | | | | |
| DEPARTMENT OF AGRICULTURE, TOTAL..... | 392 | 438 | 428 | - | - | - |
| SOIL CONSERVATION SERVICE..... | 392 | 438 | 428 | - | - | - |
| DEPARTMENT OF COMMERCE, TOTAL..... | 5,790 | 6,260 | 6,766 | 2,629 | 1,374 | 555 |
| BUREAU OF THE CENSUS..... | - | - | - | - | - | - |
| NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION..... | 5,790 | 6,260 | 6,766 | 2,629 | 1,374 | 555 |
| DEPARTMENT OF DEFENSE, TOTAL..... | 2,974 | 1,743 | 2,230 | - | - | - |
| DEPARTMENT OF THE NAVY..... | 2,974 | 1,743 | 2,230 | - | - | - |
| DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, TOTAL..... | - | - | - | 2,118 | 3,791 | 4,730 |
| HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION..... | - | - | - | 270 | 501 | 1,180 |
| NATIONAL INSTITUTES OF HEALTH..... | - | - | - | 119 | 290 | 300 |
| OFFICE OF EDUCATION..... | - | - | - | 1,729 | 3,000 | 3,250 |
| DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT..... | - | - | - | 338 | 275 | 800 |
| DEPARTMENT OF JUSTICE, TOTAL..... | - | - | - | 6 | 514 | 516 |
| IMMIGRATION AND NATURALIZATION SERVICE..... | - | - | - | 6 | 14 | 16 |
| LAW ENFORCEMENT ASSISTANCE ADMINISTRATION..... | - | - | - | - | 500 | 500 |
| OTHER AGENCIES | | | | | | |
| FEDERAL TRADE COMMISSION..... | - | - | - | 15 | 15 | 16 |
| NATIONAL SCIENCE FOUNDATION..... | - | - | - | 1,457 | 1,310 | 515 |
| OFFICE OF ECONOMIC OPPORTUNITY..... | - | - | - | 1,007 | 1,070 | 1,030 |